



2012 IPHONE + IPOD BUYERS' GUIDE



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Welcome to the 2012 iPhone + iPod Buyers' Guide.



When Apple declared 2011 “the year of iPad 2” in March, no one expected that the next six months would pass without new iPhone or iPod hardware releases. But during a period that overlapped with the decline and untimely passing of Apple CEO Steve Jobs, the company focused on software - iOS 5, iTunes 10.5, and the Internet synchronization service iCloud - while delaying its annual iPhone refresh until fall for the first time. Everyone was surprised that the iterative iPhone 4S was the only truly new device announced in October.

Yet between the iPhone 4S, iPad 2, Apple TV, and all of the other iPhones and iPods, Apple's digital media product lineup is the best it's ever been; there are now truly great options at \$99 and up. As always, iLounge is ready to help you pick the right hardware and add-ons for your needs. We've thoroughly tested all of these devices, as well as thousands of accessories and apps. Only the best ones are inside our giant 2012 iPhone + iPod Buyers' Guide. Enjoy!

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Dock your iPad from a distance.

Keep your iPod within easy reach at home or in the car.
Dock your iPhone without removing the case.



dockXtender
30 pin Dock Extender Cable
for iPhone, iPod, and iPad



more seriously useful cables at www.cablejive.com

LunaTik

Transform your iPod nano into the
world's coolest multi-touch watch.
LunaTik.com

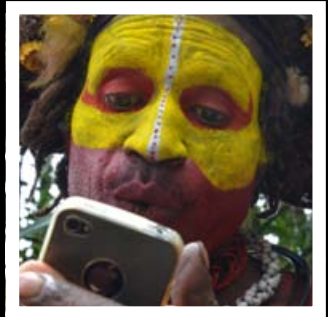


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Four years after Apple released the original iPhone, the iPod family seems to be in a slump. Sales are down. So is innovation: even the best iPods are just stripped down iPhones. And this year brought the biggest iPod surprise yet: no new hardware. Apple replaced its annual “music event” with “Let’s Talk iPhone,” and apart from a white-bezeled version of the 2010 iPod touch, the only new iPod announcements were software-related. Once again, it completely ignored the iPod classic, now celebrating its 10th anniversary. Discussing its most recent, incredible quarterly results, Apple suggested that it wasn’t concerned about declining iPod sales; it had actually expected them to fall further than they did.

Apple’s focus on growing the iPhone has raised questions about the iPod’s viability. Dedicated music and video players were responsible for bringing Apple to the masses - millions of people carried them everywhere, every day. Yet today, Apple is actively trivializing the iPod’s influence on its other products: the iPhone’s and iPad’s “iPod” apps were recently renamed to become just “Music,” while App Store previews continue to show only “iPhone” and “iPad” screenshots. It’s as if iPods have become afterthoughts.

But there’s a bigger picture. Apple changed its name five years ago to reflect a focus on consumer devices, but it never gave up on popularizing its “computers.” They’re just smaller and cooler. Some are called Macs, iPads, or iPhones. The smallest ones are iPods, and today, they put a lot more than just songs in your pocket. If history’s any guide, they’ll be even better tomorrow.



Dennis Lloyd
Publisher

A long-time fan of Apple products, Dennis Lloyd was a graphic designer and DJ before creating iLounge, the world’s most popular resource dedicated to iPods, iPhones, iPads, and iTunes. Dennis is happily married with a daughter. He lives in Irvine, CA.



Jeremy Horwitz
Editor-in-Chief

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Clockwise from bottom left: Apple’s 2011-2012 portable product lineup expands to include the iPhone 4S, which was demonstrated by iOS chief Scott Forstall. A modestly updated iPod family was unveiled by marketing head Phil Schiller, while new Apple CEO Tim Cook led the event.



Apple’s Late Event: iPhone 4S, iOS 5.0 Go Public

iPods see modest tweaks as iPhone 3GS drops to \$0, iPhone 4 becomes \$99 model

Despite rumors of a teardrop-shaped iPhone 5, Apple instead used its “Let’s Talk iPhone” event in October to introduce the familiar-looking iPhone 4S (16GB/\$199, 32GB/\$299, 64GB/\$399), improving the voice controls, speed, graphics, cellular performance, and rear camera of the 2010 iPhone while leaving the glass body untouched. iPods got short shrift: despite claims of a “new” nano and touch, Apple actually only updated the 2010 devices’ software, changing the nano’s Home Screen with larger icons, and

giving the iPod touch the iOS 5.0 update it had announced in June (see next pages). It also released a white version of the 2010 iPod touch without changing the hardware inside. Less conspicuously, Apple added a host of new features to the Apple TV, including NHL and Wall Street Journal videos, and said nothing about the 2009-vintage iPod classic. While critics called the Tim Cook-led event boring, it was overshadowed the next day by the death of former CEO Steve Jobs, and the iPhone 4S had a wildly successful launch a week later.

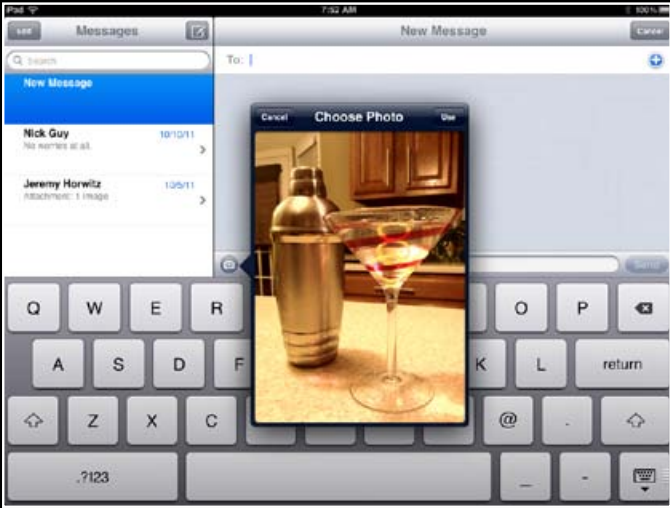
iTunes 10.5 Brings Wireless Syncing, iCloud, iTunes in the Cloud + iTunes Match

Rather than introducing a new “iTunes 11” for 2011, Apple instead fine-tuned iTunes 10 with two big new features: wireless syncing for iOS 5 devices, and support for iCloud, freeing iPhones, iPod touches, and iPads from the need to physically connect to PCs or Macs. Between iCloud and a

related subscription-based Internet service called iTunes Match, which mirrors your iTunes music library online, Apple is moving users towards keeping their files and settings wirelessly accessible wherever they may be. Now iOS devices can function as standalone computers from the minute they’re purchased, a huge change that will reduce the need for traditional desktops and laptops.



Far more information on these and other topics of interest to iPod and iPhone users is available from the iLounge.com news archives at ilounge.com/index.php/news/archives/.



iOS 5: The Big Changes (And Lots of Smaller Ones)

PC-free set up, notifications, iMessage, AirPlay mirroring are game-changers

As trite as the phrase may be given Apple's history of major updates to its mobile operating system, iOS 5 makes big changes to the ways iPhones, iPods, and iPads work. Here's what new iOS users can expect.

On-Device Set Up. Before iOS 5, the only way to start using an iPhone, iPod touch, or iPad was to physically connect the device to iTunes. Now, you can start using any of these devices straight out of the box, so long as you can access a Wi-Fi or cellular network. Wireless iTunes and iCloud Syncing are discussed further on pages 10 and 11.

Notifications. Between the revised Lock Screen and the new Notifications Center, all of your phone calls, messages, and in-app

notifications can now be found in one place, along with weather and stocks. Just swipe a Lock Screen icon to go to the correct app.

Reminders. This new app notifies you with a pop-up message at the time or place of your choosing - it can even use GPS to remind you as you leave a place. Since it's tied into iOS 5, you don't have to worry about missing notifications if you restart your device.

iMessage. Added to the iPad and iPod touch, this update to the iPhone Messages application lets all iOS 5 users send text, picture, and video messages to each other without wasting money on SMS or MMS messages. It's one step closer to iChat for iOS, except video and audio chats remain separate.



AirPlay Screen Mirroring. Apple's Digital AV Adapter allows the iPad 2 and iPhone 4S menus and apps to be seen on any HDTV. In iOS 5, AirPlay is enabled for all iOS apps, so apps, games, and the iOS UI wirelessly stream to an Apple TV without connecting anything physically to the iPad 2 or iPhone 4S.

iOS Photo Editing. Updates to the Camera and Photos apps let you tweak images stored on the device. Camera adds a focus- and exposure-locking tool, plus the option of a grid for aligned shooting. Cropping, red eye reduction, and exposure corrections can all be handled from the Photos app.

Twitter Integration. If you want to post a photo, a map, or something else to Twitter, you can now compose a tweet with an attachment even if you don't have the Twitter



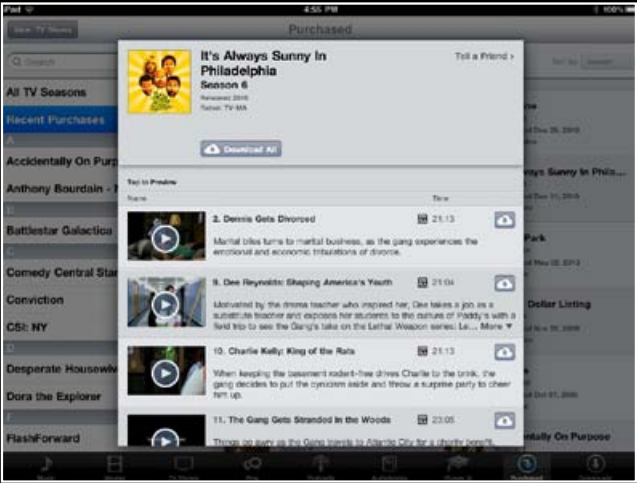
app installed. You can also follow individuals' tweets through Contacts links to Twitter's app.

iPad Tabbed Web Browsing + Split Keyboard. iPad users can now keep up to 9 web pages open at once for instant access, using tabs. iPads can also split the keyboard in two halves for easier thumb typing.

Newsstand. The App Store's magazine and newspaper collection has been improved, with a dedicated Home Screen "Newsstand" folder, support for automatic subscription downloads, and a mini-store for publications.

There's a lot more, including text formatting in Mail, a saved Reading List for web pages, and 200 small but nice tweaks. Details on these features can be found in iLounge.com's Instant Expert: Secrets & Features of iOS 5 article.





New: iCloud, iTunes in the Cloud + iTunes Match

Apple moves music, TV shows, apps, email and data to always accessible servers

Since the release of the first iPod ten years ago, iTunes has become a behemoth: as the nearly exclusive way to put music, photos, videos, games, and apps onto all of the company's pocket devices, iTunes grew far past the point at which people complained about its performance. So Apple did what Apple occasionally does: it made cuts. And it started by cutting out iTunes itself.


As of now, iTunes - and the computers running it - are no longer required to activate, synchronize, or back up iPod touches, iPhones, or iPads running iOS 5. Connect any of these devices to any Wi-Fi network and you can add content wirelessly without

even using the USB cables Apple includes in their packages. You have three options: treat the device as new, transfer settings from iTunes, or beam over settings from Apple's new iTunes alternative, iCloud - a collection of Internet servers that manage your email, calendars, contacts, and reminders, web bookmarks, notes, photographs, documents, and app settings. Every iOS user gets 5 GB of free iCloud storage, with the option to upgrade to 10GB (\$20/year), 20GB (\$40), or 50GB (\$100) if you need more. If you have a lot of stuff in iTunes, you might. But then again, you might not. Apple gives you a free e-mail account, and iTunes Store music, app, and TV purchases don't count towards your limit.

That's thanks to iTunes in the Cloud, a second piece of the puzzle. Most of your past and future iTunes Store purchases are already sitting on Apple's servers, now ready to be redownloaded to your device or iTunes whenever you want them. You can download individually or in bulk, by song or by album, by TV show episode or by collection. Like iCloud, iTunes in the Cloud is a free service for Apple customers, and has only gotten better since it was announced: it started out solely for music and apps, but now includes a substantial number of TV shows, which can also be streamed directly to second-generation Apple TVs. Books purchased from the iBookstore and iTunes can also be redownloaded for free to iOS devices and computers. All that's missing are movies and international support: iTunes in the Cloud is currently only available in a handful of countries, with rollouts planned for other territories as contracts with recording labels, artists, and studios are renegotiated.

The final element is iTunes Match, arguably the most optional of Apple's new cloud services - and also the one that has the greatest potential to screw things up for the company going forward. Offered for a \$25 annual fee, iTunes Match scans your iTunes library, matching as many music tracks as possible from your collection, then making all of them accessible to you no matter where you are, regardless of the capacity of your device. On a positive note, this enables users with massive music libraries to save storage space by downloading tracks on an as-needed basis; music streams at 256kbps, too. If iTunes Match expands to include videos, it could even reduce the need for bigger iOS devices. But accessing music over a cellular connection can eat into limited data plans, and the idea of selling cloud-based access to content you already bought may incentivize Apple to deliberately limit the storage in future iPod touches, iPhones, and iPads. You can decide for yourself whether to subscribe or pass.





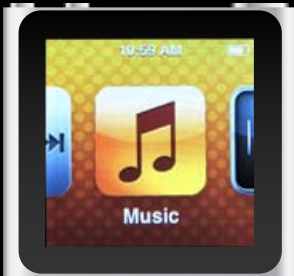
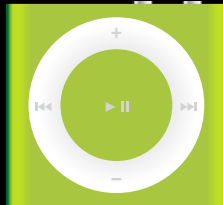
THE iPhone + iPod BUYERS' GUIDE

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Are the latest models right for your needs?

After dramatically introducing four all-new iPod and iPhone models in 2010, Apple surprised the world by dragging out its 2011 introduction event until October, then debuting only one truly new model: the iPhone 4S. Other than price tweaks, the 2010 lineup remained virtually unchanged for another year, and thus our buying advice is largely the same - except that the risk of a more significant upgrade to any given model will grow by the middle to end of 2012. Apple will have to decide whether to start making new iPod introductions earlier in the year to woo back-to-school shoppers, consolidate its former "music events" with iPhone launches in the fall, or resume its prior June iPhone launch schedule. If you're looking to buy an Apple device without fear of imminent replacement, we suggest you do so early rather than waiting until mid-2012.

What's new for 2012? Cheaper iPod nanos and iPod touches. A new iPhone. And cheaper old iPhones. Apart from the iPod classic, which Apple has oddly downplayed, here's a quick two-page comparison of the current iPods and iPhones. On the next pages, we take detailed two-page looks at each model, with excerpts and photos from our full reviews of each device.



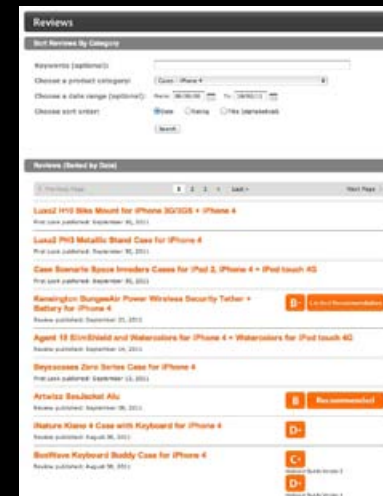
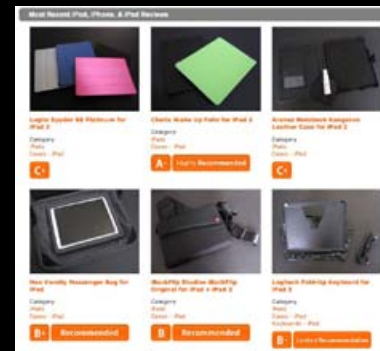
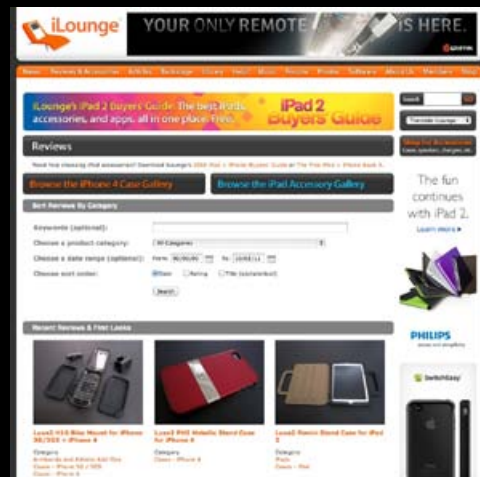
2012 IPOD LINEUP

MODEL	IPOD SHUFFLE	IPOD NANO	IPOD TOUCH
PURPOSE	Ultra-Small Music Player	Sport-Ready Media Player	Touchscreen Media Player
SIZE	1.14" x 1.24" x 0.34"	1.48" x 1.61" x 0.35"	4.4" x 2.3" x 0.28"
PRICE	\$49	\$129-\$149	\$199-\$299-\$399
STORAGE	2GB	8GB-16GB	8GB-32GB-64GB
COLORS	5	7	2
WEIGHT	0.44 Oz.	0.74 Oz.	3.56 Oz.
SCREEN	No	1.54" / 240x240 / 220ppi	3.5" / 960x640 / 326ppi
MUSIC	14-15 Hour Battery	24-33 Hour Battery	39-40 Hour Battery
PHOTOS	Yes	Yes	Yes
GAMES	No	No	App Store Downloads
VIDEOS	No	No	7-8 Hour Battery
PHONE	No	No	No
RATING	B	B	A- (8/32GB) / B+ (64GB)
SUMMARY	This colorful, audio-only model lacks for a screen, storage capacity, and battery life versus a nano. But it's cheap, supports multiple playlists, and can speak playlist names.	Modestly improved with a new icon interface and 18 total clock faces for use as a watch, the nano is a "good enough" wearable audio- and photo iPod with Nike+ and FM radio features.	Now sold in black- or white-faced versions, the fourth-gen iPod touch is otherwise unchanged, with a high-res screen, two so-so video cameras, and enough horse-power for great games.



2012 IPHONE LINEUP

MODEL	IPHONE 3GS	IPHONE 4	IPHONE 4S
PURPOSE	Touchscreen Media Phone	Touchscreen Media Phone	Touchscreen Media Phone
SIZE	4.5" x 2.4" x 0.48"	4.5" x 2.31" x 0.37"	4.5" x 2.31" x 0.37"
PRICE	\$0 + Contract	\$99 + Contract	\$199-\$299-\$399 + Contract
STORAGE	8GB	8GB	16GB-32GB-64GB
COLORS	1	2	2
WEIGHT	4.8 Oz.	4.8 Oz.	4.9 Oz.
SCREEN	3.5" / 480x320 / 163 ppi	3.5" / 960x640 / 326ppi	3.5" / 960x640 / 326ppi
MUSIC	29-30 Hour Battery	40-52 Hour Battery	40-41 Hour Battery
PHOTOS	Yes	Yes	Yes
GAMES	App Store Downloads	App Store Downloads	App Store Downloads
VIDEOS	9-10 Hour Battery	10-11 Hour Battery	10 Hour Battery
PHONE	5 Hour Battery	6 Hour Battery	6-8 Hour Battery
RATING	B	B+ (GSM) / B (Verizon)	A-
SUMMARY	Merely adequate in camera, battery, and screen quality, the 3GS is a solid "free with contract" starter smartphone, now running iOS 5 with only several key features missing versus the iPhone 4 and 4S.	Better than 3GS in all ways save antenna performance and durability, iPhone 4 is faster, with a great screen, near-great battery life, and a much better camera, but the same limited storage space.	Faster and better for games than iPhone 4, 4S has a great new camera, super voice recognition, antenna fixes, and worldphone support. Durability and cellular speed differences remain issues.



00 HERE'S HOW WE WORK

A BRIEF LOOK AT HOW WE RATE HARDWARE, ADD-ONS + APPS

iLounge has covered Apple's portable media devices since 2001, and has reviewed more iPod, iPhone, and iPad add-ons than any other publication on the planet. Because we've been testing these devices since their inception - and because of our unique editorial independence from Apple and third-party developers of accessories and software - our reviews and ratings are based on deep, extensive experience, and free of the taints that arise from cozy relationships between writers and the companies they cover. Whether you agree or disagree with our conclusions, you can always trust that they've been reached honestly, with our readers' interests and needs foremost in our minds.

On the pages that follow, you'll find three current iPods and three different iPhones, as well as the very best accessories designed to work with them. Our editors have hand-selected these accessories from thousands we've covered over the years, focusing on top recent picks and nuggets of useful information that will help you make smarter purchases. Below each first page, you'll find iNtelligence, a smart "bottom line" pointer to help you save time and money. If you want additional information on any these products, use the Reviews & Accessories button on the orange navigation bar at the top of the iLounge.com home page.

iLounge has used the same letter grade rating system for years, issuing A to F ratings to Apple hardware, accessories, and apps - strictly on the basis of merit. On the next page, we explain our rating system and philosophy so you can understand our buying advice for each iPhone, iPod, and accessory in this Guide.



Our new iNtelligence summary provides smart big picture advice in a quick, simple sentence.

Understanding Our Ratings.

iLounge's letter grade ratings break down into "excellent" (A), "good" (B), "okay" (C), and "bad" (D) marks, with two ratings (D- / F) reserved for products with serious defects.

A grades are reserved for the very best products we **highly recommend** to our readers. Fewer than 2% of all products we review receive flat A grades, while A- ratings indicate small issues that limit their universal appeal. B grades are issued to products we **generally recommend** to our readers, with caveats. These products are almost universally well-made and useful, but have one or more large issues that will likely bother most users. Products receiving B- grades qualify only for our **limited recommendation**, which means "think seriously about this before buying." C grades are for products that we consider to be **decent**, but wouldn't recommend given other, better options, while D grades are for products that we would **pass on** no matter what. If you see a rare D- or F rating for an accessory, that means our testing uncovered something seriously wrong with its core functionality (D-), or potentially dangerous to users (F). For apps, these low ratings typically signal junk-level value or seriously screwed-up programming.



The iLounge Difference

Over the years, the distinctions between true "reviews" and marketing hype disguised as analysis have become harder to spot. Our reviews are written by hard-working specialists who have covered Apple for years, yet don't have clandestine relationships with Apple or its developers. We review every item from the consumer's perspective - yours - but with an advantage: we've covered thousands of products from thousands of companies, so when we say something's the "best," we can say so with industrial-strength authority.

Because of a strict separation between our business and editorial sides, and our strong belief in the value of an objective resource for Apple customers around the world, our reviews are in no way influenced by advertising or outside concerns. We have no agenda other than the promotion of a happy and well-informed global community of Apple users.



Get Far More Detail From iLounge Reviews

Our Buyers' Guide is designed to be a convenient summary of the comprehensive reviews we publish online, all of which are archived at ilounge.com/index.php/accessories/. We spotlight new reviews on our main page several times each week, and with only limited exceptions, make an effort to review products by as many different developers as possible.

In response to an ever-increasing number of new products - and a world in which "instant reviews" from anonymous and/or inexperienced users have become more common - we continue to take the time to properly evaluate the good and bad points of each product we review. Our goal isn't to be the fastest; we want to be the most reliable.

Please address any questions or requests for new product reviews to jeremy@ilounge.com.



01 IPOD SHUFFLE

2 GB - 15 Hour Battery - Music - Data - \$49



After an embarrassing year with the buttonless third-generation iPod shuffle - a confusing metal stick that depended on a wired and failure-prone three-button remote for its track and volume controls - Apple replaced its entry-level model with this improved version, and kept it around for 2012. The fourth-generation iPod shuffle is a smaller but better retread of the second-generation model, adding only two features: multiple playlists and device-spoken VoiceOver menus. A dedicated VoiceOver button on top activates the vocal prompting, telling you artist, song, and playlist titles, as well as battery status. A five-button Control Pad on front is the size of a U.S. quarter, with just enough polished aluminum on all sides to make the device easy to hold; the shirt clip on the back lets you wear it, and matches one of its five body colors - all are unchanged from late 2010.

The current iPod shuffle is a good music player, with a 15-hour battery, solid sound quality, and relative simplicity on its side. But it doesn't do much else. Sold only in a 2GB capacity, it has too little storage for a full music library, and no screen, so you load it with small batches of tracks that can be played with little direct control - or in random "shuffle" mode. It's also incompatible with the many docking, car, and speaker accessories that work with other iPods, requiring a special packed-in charging and sync cable. Improvements to the iPod nano and touch have made the shuffle feel even simpler than it was before, though it remains a solid value for its very low price.



Pick the nearly disposable iPod shuffle only if the nano is too expensive for your budget.



In the Box + Design

The iPod shuffle is packaged with a simple pair of earbuds that do not include remote track or volume control features. A tiny USB-to-headphone port charging and syncing cable, comically small instructions, and an Apple sticker are in the box.



As with the last two iPod shuffles, this model has a firm rear shirt clip that can be used to attach the device to your clothing. On the top is a VoiceOver button, located between the three-position (off/ordered/shuffled playback) power switch, a status indicator light, and a standard headphone port.



Colors

Five current iPod nano colors repeat here: muted rose pink, copper-like orange, silver, a dull blue, and green.



Compared With Past Models

Most remarkable about the fourth iPod shuffle is that it has lost virtually nothing besides size compared with the 2005 original. The first shuffle included a built-in USB connector, whereas subsequent versions required users to carry a little cable around or wait to sync and charge at home. A first-generation lanyard necklace was replaced with rear clips on the last three models. Otherwise, the \$49 metal 2GB iPod shuffle offers better sound, capacity, and features than the original plastic \$99 512MB model, while building upon the control options of the second-generation shuffle and taking the VoiceOver/multiple playlist features from the third.

What changed is the look and feel of the aluminum, now polished to a reflective finish rather than left with a matte texture. While the metal is a little more eye-catching than on prior shuffles, it also makes the current model slippery with moist fingers, a possible issue when removing the shuffle after a workout. Users continue to complain about the headphone port's susceptibility to sweat intrusion; wearing the shuffle upside down may help limit the port's exposure to moisture.



02 IPOD NANO

8-16 GB - 24+ Hr. Battery - Music - FM Radio - Photos - \$129-\$149

Originally released in late 2010 with an iPhone/iPod touch-mimicking but cluttered touchscreen interface, the tiny sixth-generation iPod nano received a software update in late 2011. Today, the nano is easier to use, displaying a horizontal line of larger, scrolling icons that appear one at a time, with the edges of additional choices poking out on the sides of the screen. If you prefer the old four-icon grid, it's still there, along with audio and photo playback, FM radio tuning, and Nike+ and pedometer options - all particularly nice for athletic use.

On the other hand, this iPod nano loses the video playback, video camera, games, and bigger screen of the amazing 2009 model, replacing those features with a shirt clip and marginally useful "multi-touch" display. The screen has more pixels per inch than any Apple product except for the iPhone 4/4S and iPod touch, but is only 1.54" in size, so small that you can't do much with it. You can play photos back on an external display, but they look horrible - worse than on any prior iPod.

There's only one multi-touch gesture for the iPod nano: two fingers to rotate the square screen, useful when you want to wear the nano or use it as a clock: 18 different watch faces are now included. Seven glossy metal color choices remain, including graphite gray and (PRODUCT) RED.

While this isn't the best iPod nano ever, it's cheaper than before, has strong sound quality, and is a better choice for serious music fans than the iPod shuffle. The iPod touch offers a lot more.



If you want to wear an iPod, this is the best pick. Otherwise, the iPod touch is a better buy.



Packaging + Pack-Ins

Barely taller than the included earphones, the nano arrives with a USB to Dock Connector cable, manual, and Apple sticker in its amazingly small clear hard plastic box. Nothing's changed between the 2010 and 2011 releases; early units we ordered for review even had the old four-icon stickers on their faces; the sticker changed weeks later.

Body Colors

Six of the seven colors are available from retailers worldwide: beyond silver and graphite gray, the green, copper orange, mild blue, and rose pink tones are somewhat subdued compared with earlier nanos. The intense red version is an Apple Store exclusive, with some proceeds going to the Global Fund to fight AIDS in Africa.



Add-On Compatibility

The nano supports voice recording if you supply a microphone, and works with virtually all iPod accessories. Nike+ support is now built in, without the need for a Nike + iPod Sport Kit, though the add-on tracks runs better.



Screen + New Clocks

The nano's 1.54" screen sometimes feels cluttered, but it's impressively detailed, and the new watch faces - including Mickey and Minnie Mouse, two Muppets, and watches with gears - show off neat animations.



Compared With Past Models

The current iPod nano falls back to the feature set of the first and second models, losing the movie and TV show support of the "fat" nano and its taller sequels, as well as the fifth model's camera and mic. All Apple has added is a rear clip that enables the nano to be worn on a shirt, jacket, or bag, with the headphone port and Dock Connector remaining on the bottom, and three buttons for volume and screen on-off along the top surface.



03 IPOD TOUCH

8-32-64 GB - 30+ Hr. Battery - Music - Videos - Apps - \$199-\$399

Now starting at \$199 and available with black or white fronts, the iPod touch is the best iPod currently available. Since late 2010, the touch has included twin video cameras for FaceTime video calling and 720p recording, as well as a 960x640 "Retina Display" capable of the same high-resolution graphics as the iPhone 4/4S, only with less viewing angle flexibility. Like the iPhone 4, it includes 802.11n/Bluetooth 2.1 wireless, great battery life, Voice Control, and Apple's A4 processor, but it's noticeably thinner, lighter, and more durable. However, it falls well short of every iPhone in rear camera performance and GPS.

While the base 8GB model is weak in storage, the midrange 32GB version has enough space for the typical user's music, video, app, and game collections with some extra room to spare, and its \$299 price tag is fair given what's inside. Both of these models merit our high recommendation, but the \$399 64GB model remains too expensive, again earning our B+ rating this year. If you can afford the premium and want the extra storage space, it's still a good choice.



The 8GB and 32GB iPod touches are Apple's "sweet spots" for 2012 - truly great options.

Pack-Ins + Accessory Compatibility

iPod touches come bundled with a USB charging and synchronization cable, Apple's classic white earbuds - without a three-button remote or microphone - as well as two Apple logo stickers and small manuals. They work with virtually every iPod accessory released over the past four years, plus new wireless AirPlay + Bluetooth speakers.



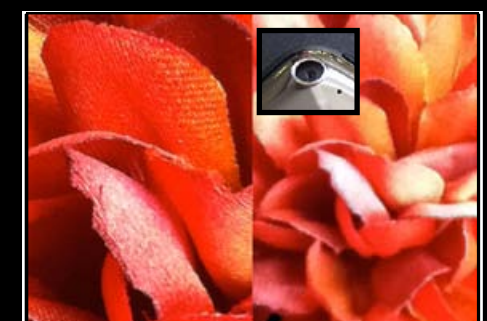
Compared With Past Models

Apple has reduced the iPod touch's front metal as much as possible, trimming a once large charcoal bezel down to a thinner strip of polished stainless steel than was on the 2008 and 2009 models. A thin ring of plastic matched to the black or white face prevents the glass screen from chipping. Mirror-polished steel remains on the back, which is actually thinner than an iPod shuffle or nano, albeit far more susceptible to scratches - a reason to look for protective film or a case even before you take the touch out of its package. Volume buttons on the side provide control over the pretty good built-in speaker, which vents through a mesh grille on the bottom next to the Dock Connector and headphone ports. The rear camera, a pinhole microphone, and Sleep/Wake Button are found together on the top left corner when viewed from the back. There's no longer an plastic antenna cover on the back. Inside is a gyroscope for motion tracking; there's still no GPS or cellular chip inside.



iOS 5's New Features

In addition to past great iOS features, iOS 5's new iPod touch Messages app lets iPods send free SMS/MMS-style messages, and Photos now includes cropping, red-eye removal, and one-touch contrast optimization tools.



Camera Problems

The iPod touch rear camera snaps some of the lowest-quality still images ever taken by an Apple device: 0.7-Megapixel shots (right) look weak by contrast with the iPhone 4 (left). But it's good enough for 720p videos.



04 IPHONE 3GS

8GB - GSM Phone - Music - Videos - Apps - \$0*

At one point, the iPhone 3GS was Apple's flagship iPhone; now, it's free with a two-year contract. Equipped with 8GB of storage - too little for a modern collection of apps, videos, or songs - the 3GS still trumps the current iPod touch with built-in GPS/compass hardware for realtime mapping and navigation, a decent 3-Megapixel rear camera, and solid phone calling features. It even runs iOS 5, the latest Apple operating system, and supports basic Voice Control for calling and music playback. From a software standpoint, it's capable, if slow.

But a lot has changed since the 3GS came out in mid-2009, and the hardware's so-so by today's standards, with notably weak battery life for 3G data and calls. Between its non-HD video camera, lack of FaceTime support, lower-res screen, and slower speed, it falls well behind both the iPod touch and iPhone 4 in many regards. And it most likely won't run iOS 6, unlike other iOS devices. The old iPhone 3GS is a budget pick, and will leave all but first-time iPhone users wanting more, quite possibly halfway through their contracts.



Pick iPhone 3GS if you're highly cost-sensitive and not concerned about photos or iOS 6.



Inside The Box

Every iPhone comes with the same three accessories: Apple's Earphones with Remote + Mic, a USB to Dock Connector cable, and a compact wall power adapter. Depending on the country you're in, the adapter may be shaped a little differently; you may also get a small metal SIM tray removal tool, and for 3GS, a standard SIM card.



A Glossy Plastic Body

Though the front glass is still susceptible to cracks and scratches, iPhone 3GS's plastic body stands up better to abuse and accidental drops than the glass-backed iPhone 4 and iPhone 4S. We still advise buying a case.



Camera Performance

While the iPhone 4's rear camera blows away 3GS's for both stills and videos, the older model takes "cell phone" shots that are better than any iPod or iPad, with autofocus and over four times the amount of detail.



iPhone 3GS Or iPod touch?

The true cost of a "free" 8GB iPhone 3GS is around \$482 over its two-year contract versus \$199 for an iPod touch. So why pick the 3GS? It can make and receive phone calls over a GSM cellular network, while the iPod touch is limited to VoIP calling over Wi-Fi. Only the 3GS offers cellular data access, as well as a GPS chip and compass to enable comparatively precise realtime navigation without any add-ons. The 3GS's 3.2-Megapixel rear camera easily beats the iPod touch's 0.7-Megapixel version for still pictures. But 3GS has only 640x480 video recording, lacks FaceTime support, and has no front-facing camera. It also has a lower-resolution screen, weaker gaming performance, no gyroscope, and less battery life under some circumstances. You can choose what's right for you.





05 IPHONE 4

8 GB - GSM Or CDMA Phone - Music - Videos - Apps - \$99*

As we noted when it was released last year, only two things kept the iPhone 4 from being history's highest-rated iPhone: its fragile glass body and external antenna, both of which mandate use of a case. Otherwise, it's a stunner: beautiful, with strong battery life, an even better 960x640 Retina Display than the one in the iPod touch, and twin cameras that work well enough to replace low-end dedicated point-and-shoot units. FaceTime video calls, regular phone calls, and apps all perform impressively on the iPhone 4; cellular uploads, games, and 802.11n Wi-Fi are markedly faster than iPhone 3GS's, as well.

Now offered in white or black, and in separate GSM (AT&T/rest of world), Verizon CDMA or Sprint CDMA versions, the iPhone 4's low \$99 price comes with two issues: a constrained 8GB of space, and a two-year contract. The GSM version gets up to twice the cellular data speeds of the CDMA versions, lets you make calls while you're using 3G data, and works with most international cellular networks, reasons the GSM version rates a B+ over the CDMA's flat B.



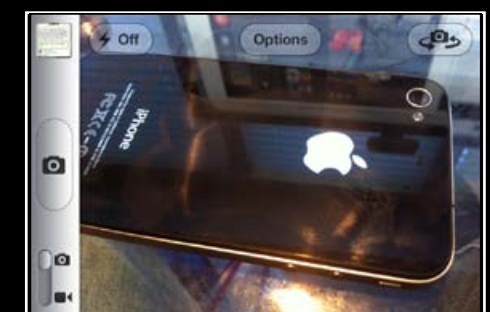
Pick the faster, travel-friendly GSM version unless you are locked into Verizon or Sprint.



Compared With Past Models

Apart from body changes, iPhone 4 loses almost nothing save thickness from earlier models. Apple added a second, echo-cancelling microphone to the iPhone 4, as well as a gyroscope for superior motion tracking in games and other apps, 802.11n Wi-Fi, and the A4 CPU, plus as much RAM as the iPad 2. It improved speaker, camera, and GPS performance, adding FaceTime for video calling. A long-delayed white model emerged after extensive retooling to address reported discoloration, camera, and proximity sensor issues that were discovered only days before it was originally supposed to launch in mid-2010. All of these problems were fixed.

The biggest issues with iPhone 4 relate to durability and antenna performance; the original iPhones' metal and plastic bodies gave way to panes of glass that crack when dropped, and the antenna loses strength if hand-held in certain ways. Users can fix these issues by choosing a good case.



Better Photography

Twin cameras enable the iPhone 4 to offer FaceTime video calling over Wi-Fi; the rear camera takes 720p videos and nearly point-and-shoot-quality 5-Megapixel still pictures, even in low light. An LED flash helps in darkness.



Versus iPhone 4S

While the iPhone 4S camera is better, and its processors are faster for apps and 3-D games, the biggest difference now is Siri. The iPhone 4 has a less versatile, calling- and music-only feature called Voice Control.



Pack-Ins + Accessory Compatibility

The iPhone 4 comes with the same earphones, USB cable, and wall charger as the 3GS; the GSM version generally also includes a micro SIM card that's smaller than 3GS's, and a SIM tray removal tool. iPhone 4 has a slightly better Bluetooth 2.1 chip inside, improving its wireless accessory performance, and works with most wired/docking add-ons.



Linear Series for iPhone 4/4S

Stylish, Luxurious, and Form-Fitting. Our Linear Series is comprised of 3 interchangeable polycarbonate pieces with the ultimate selection of colors. So whether you want to sport your favorite team's colors, show off the colors of your alma mater, or go with one solid piece, use SGP's Do-It-Yourself promotion to design the case you want. Express yourself with SGP's Linear Series for the iPhone 4/4S



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AN iPhone WALL DOCK ADAPTER
FOR THE ORIGINAL iPhone POWER SUPPLY



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iLounge: "A surprisingly thoughtful and nice design"

Xtand Go™

The flexible in-car gadget mount



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06 IPHONE 4S

16-32-64 GB - Worldphone - Music - Videos - Apps - \$199-\$299-\$399*

Though it's an evolutionary upgrade to the iPhone 4, there's no question that the iPhone 4S has improved - and that it's the best iPhone Apple has ever sold. Thanks to new hardware, the prior model's antenna issues have been solved, and a single version of the phone works with GSM and CDMA networks around the world. Substantial camera upgrades enable the 4S to shoot full HD videos and cleaner, higher-definition still images; the addition of an Apple A5 processor doubles 4S's speeds and radically improves its 3-D graphics performance. On the software side, a new feature called Siri can navigate many apps and even take voice dictation, while providing spoken responses.

But the improved performance comes at a cost: battery life. The iPhone 4S tends to fall short of the iPhone 4: our tests showed an hour less of video playing, 11 fewer hours playing audio, and 45 minutes less of cellular data use. Under most circumstances, the 4S's additional power justifies its few shortcomings; overall, we'd pick it over the iPhone 4 and 3GS without any question.



iPhone 4S's better camera, capacity, and Siri fully justify its price premium over iPhone 4.



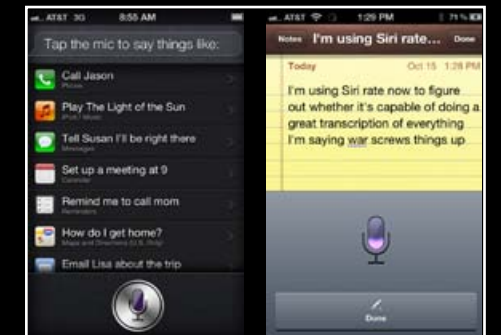
Packaging, Pack-Ins + Accessory Compatibility

Unlike the iPhone 4, every iPhone 4S includes a micro-SIM card - even the phones sold for use on CDMA networks, which lets them work on international GSM networks. The iPhone 4S box also includes the same USB cable, earphones with remote and mic, and wall adapter in the U.S., while European versions have their own chargers.



The King Of All (Cellphone) Cameras

While the iPhone 4's rear camera wasn't any slouch, the new 8-Megapixel still and 1080p video camera inside the iPhone 4S is unquestionably better - one step closer to a modern pocket camera, albeit without the zoom lens. Still photos snapped with the 4S offer noticeably greater detail and lower grain-like noise than the iPhone 4, making low-light shots a little cleaner. Videos are now capable of using all of the 1920x1080 pixels on high-definition televisions, a jump of more than twice the detail recorded by the iPhone 4 video camera. They're also image-stabilized, so wind and hand jitters play less of a role in ruining photos, while the lens is improved, enabling the iPhone 4S to gather light more quickly, and thereby produce sharper images. The only down sides are in the increased storage and battery life required by the new camera system: video recording fills an empty 16GB iPhone 4S in only an hour and 20 minutes, and drains a fully charged battery in two hours and 20 minutes.



Siri As Killer Feature





Apple's virtual keyboard is sub-par, but iPhone 4S's Siri and voice dictation features make up for it. Speak words and Siri will understand well enough to provide answers or dictate emails/texts, if you have an Internet connection.



A Gaming Powerhouse

With the same graphics chip as the iPad 2, the iPhone 4S features 7 times the horsepower of the iPhone 4. It can display 1080p games on a TV with the Digital AV adapter, or use AirPlay for wireless 720p to an Apple TV.

COMPARING IPHONE SPECS

MODEL	IPHONE 3GS	IPHONE 4	IPHONE 4S
SCREEN	480x320 / 3.5" Diagonal	960x640 / 3.5" Diagonal	960x640 / 3.5" Diagonal
CAPACITY	Stated: 8GB	Stated: 8GB	Stated: 16GB-32GB-64GB
	Actual: 7.4GB	Actual: 7.4GB	Actual: 13.6-27.2-57.4GB
CELLULAR	UMTS/HSDPA/HSUPA + GSM/EDGE	UMTS/HSDPA/HSUPA + GSM/EDGE OR CDMA EV-DO Rev. A	UMTS/HSDPA/HSUPA + GSM/EDGE AND CDMA EV-DO Rev. A
			
WI-FI	802.11b/g	802.11b/g/n [2.4GHz]	802.11b/g/n [2.4GHz]
			
BLUETOOTH	Bluetooth 2.1 + EDR	Bluetooth 2.1 + EDR	Bluetooth 4.0/Bluetooth Smart
			
F. CAMERA	No	640x480 Video/Still	640x480 Video/Still
			
R. CAMERA	3-Megapixel Still 640x480 Video	5-Megapixel Still 720p Video LED Flash	8-Megapixel Still 1080p Video LED Flash Image Stabilizer
			
EXTRAS	None	Gyroscope	Gyroscope
GOTCHAS	Weak battery, chippable plastic body	Antenna attenuation, shatterable glass body	Shatterable glass body, so-so battery

EASY ADVICE

Practically, the pinches most users will feel with the iPhone 3GS are in the camera, battery, and capacity departments. While the screen isn't as sharp as on the newer iPhones, it's bright and colorful, and both the Wi-Fi and Bluetooth chips are similar enough not to make a huge difference. If you're on Verizon or Sprint, 3GS is not an option, but on AT&T, it's a fine super-cheap pick.

By contrast with the iPhone 4S, the original iPhone 4's only weaknesses for most people will be in capacity and the good rather than best rear camera. Still an extremely capable phone, iPhone 4 looks and feels mostly the same, otherwise lacking only the ability to switch between GSM and CDMA networks, and to adeptly switch its antennas for better cell strength.

As Apple's flagship iPhone, the iPhone 4S is the fastest and most network-compatible, though both it and the iPhone 4 will likely seem antiquated with the release of iPhone 5 in 2012. As a worldphone, it's the only iPhone that can be used in virtually any country regardless of where it's bought, and the rear camera is stunning, lacking only for a zoom lens. Our top pick.

2012 SAMPLE CONTRACT PRICING

MODEL	AT&T (U.S.)	VODAFONE (U.K.)	SOFTBANK (JAPAN)	AUSTRALIA (OPTUS)
8GB 3GS	\$0/\$449	£0/£319	N/A	A\$0/A\$449
8GB 4	\$99/\$549	£129/£429	¥0/¥40,320	A\$336/A\$679
16GB 4S	\$199/\$649	£239/£499	¥1,920/¥46,080	A\$432/A\$799
32GB 4S	\$299/\$749	£359/£599	¥2,400/¥57,600	A\$552/A\$899
64GB 4S	\$399/\$849	£449/£699	¥2,800/¥67,200	A\$648/A\$999
MINIMUM MONTHLY SERVICE	\$55/200MB DATA/450 MINS + \$36 1X FEE	~£26/250MB DATA/100 MINS (U.S. ~\$42/MO)	¥5,705/UNLIMITED DATA/0 MINS (U.S. ~\$74/MO)	A\$29/200MB DATA/200 MINS (U.S. ~\$13/MO)
APPLECARE	\$99	£61	¥7,800	A\$99
BATTERY REPAIR	\$86	£63	¥9,800	N/A

MINIMUMS:

8GB 3GS	\$1,455 / \$482*	£685 (\$1,111)	N/A	A\$795 (\$846)
8GB 4	\$1,554 / \$581*	£814 (\$1,320)	¥144,720 (\$1,884)	A\$1,131 (\$1,204)
16GB 4S	\$1,654 / \$681*	£924 (\$1,499)	¥146,640 (\$1,909)	A\$1,227 (\$1,306)
32GB 4S	\$1,754 / \$781*	£1,044 (\$1,693)	¥147,120 (\$1,915)	A\$1,347 (\$1,434)
64GB 4S	\$1,854 / \$881*	£1,134 (\$1,839)	¥147,520 (\$1,920)	A\$1,443 (\$1,536)

Unlike iPods and iPads, iPhone prices only start with the initial purchase of the device; to get the lower (\$0-\$399) iPhone prices shown above, you need to sign up for 24-month contracts and pay for minimum monthly data (plus voice calling) plans. The higher prices above reflect Apple's unlocked, no-contract iPhone pricing, except in Japan where phones are only sold on contract. Many cell phone carriers make their plans confusing, obscuring everything from fees to the total costs of ownership and use over 2-year contracts. For instance, Japan's SoftBank charges for calls in 30-second increments; others have heavily staggered iPhone pricing based on the data service you sign up for. The simplest but most expensive plans tend to be flat-rate prepaid with no phone subsidies.

Hidden costs abound. In addition to activation fees, text/MMS messages may well be extra; AT&T's now start at \$20 per month. iPhones have only one-year warranties despite two-year contracts, so our minimum costs include the extended two-year coverage of AppleCare; otherwise, you'll have to buy a new phone or seek third-party repairs if your iPhone dies before the contract ends. Overall, you may be better off with an iPod touch and a cheap voice-only phone if you don't need cellular data, since the total two-year cost of iPhone ownership is often over \$1,000. But the incremental cost of buying an iPhone and two years of data service is lower, shown with *-marked prices in the U.S. column. You can decide whether it's worth the added premium.

UNDERSTANDING APPLE'S CAMERAS

Apple's cameras have come a long way over the past four years, evolving from afterthoughts in early iPhones to key selling points of the last two models. Improved sensors and superior lenses helped the iPhone 4 and iPhone 4S become serious challengers to dedicated point-and-shoot cameras. But don't give up on your favorite Canon, Nikon, or Sony just yet: even the 8-Megapixel iPhone 4S falls short of good two-year-old standalone cameras in image quality, and Apple's worst cameras are pretty awful: the iPod touch 4G offers such poor resolution and low-light capabilities that it can barely snap pictures worthy of sharing on Facebook. The iPad 2's camera is just as bad.

Over the next few pages, we look at the good and bad of Apple's past and present iOS cameras, explaining where they succeed and fall short. One area in which they all excel is convenience: Apple's cameras automatically geotag your images with GPS or other location data, so it's easy to see where they were taken. iOS devices can also e-mail images by themselves, without first synchronizing them to a computer - a feature you'd be hard-pressed to find in most standalone cameras today. Powerful features and easy interfaces have made iOS cameras popular, even when their lenses and sensors have been so-so.



Looking At The Big Picture: Lenses and Sensors

The biggest challenge faced by any camera is physical: small lenses and sensors reduce image quality. Lenses gather the light a camera "sees," so bigger and clearer lenses tend to produce more detailed, color-accurate, and less distorted images; larger sensors generally produce cleaner images. To the right, you can see the actual relative sizes of lenses from a DSLR, a current-generation standalone pocket camera, and the iPhone 4S. iPhones gather light with roughly 1/6th the glass surface area of a good pocket camera, and the iPhone 4S's sensor is around 1/4th the size of the pocket camera's (albeit with fewer pixels). Consequently, iPhones struggle to produce comparably impressive images, especially in low-light conditions.



The Small Picture: Pixel-Level Details + Colors

In addition to struggling with color accuracy, early iPhone cameras and the iPod touch 4G had no ability to focus on specific parts of their images - the iPhone and iPhone 3G were set at a single fixed focus point, and anything that came too close became blurry. While color accuracy barely improved in the iPhone 3GS, Apple did introduce autofocus in that model, enabling improvements in pixel-level sharpness and modest depth of field blurring. Autofocus and dynamic color range both improved noticeably in the iPhone 4 and 4S: though iPhone 4S images tend to have a yellow cast relative to the iPhone 4, and the colors are less saturated, images are generally sharper and more detailed. By comparison, the iPod touch 4G does well with color balance but has atrocious detail levels.



Close-Up and Distance Photography

Close-up "macro" photography tends to be strong in top pocket cameras and weak across iPhones and iPod touches. Armed with a better lens, a camera such as Canon's S100 can focus accurately on subjects only an inch or two away, bringing out incredible details that the unassisted human eye might miss. Even Apple's latest iPhone 4S struggles to accurately lock onto objects in front of the lens, instead focusing on whatever's right behind it. But the iPhone 4S does just fine at several-inch distances, effectively blurring background images in much the same way as a good pocket camera, and the iPhone 4 is also pretty good at similar distances. With roughly 35mm-equivalent lenses, both are optimized for taking shots of people and objects that are several feet away, as well as the occasional image of a distant landscape. Pocket cameras often have lenses that start wider (24-28mm) for landscapes and zoom in to 35-50mm for portraits, stopping at 100mm or more.

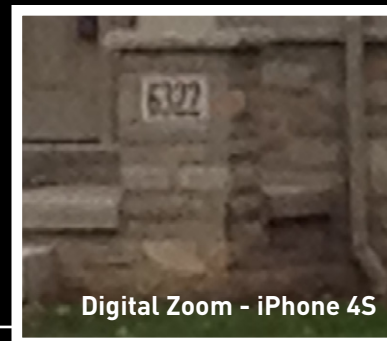


Low-Light Performance

Because of their small lenses and sensors, iOS devices have an extremely hard time gathering light indoors and even outdoors at night. The collection of untouched images to the left show how the iPod touch and iPhones did with a Halloween scene in a moderately-lit room: heavy grain and low contrast combine to muddle the brightest of three skulls and almost completely hide the darkest of them, while a two-year-old Canon S90 pocket camera outperformed the new iPhone 4S at bringing out clean details. Notably, even though it's not apparent in these unedited images, the pictures taken with the iPhone 4, 4S, and Canon cameras could all be improved dramatically using a simple photo editing tool. By comparison, the images grabbed with the iPod touch and earlier iPhones have such heavy noise and weak levels of detail that they can hardly be "fixed" - at best, you can use an app to heavily stylize the photos, as shown on the next page.



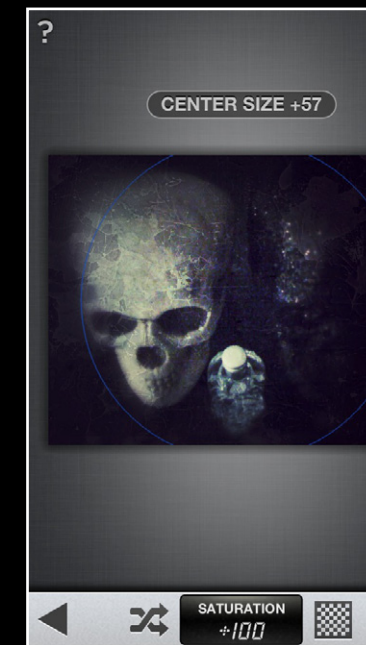
Optical Zoom - Canon S100



Digital Zoom - iPhone 4S

Optical Zoom Versus Digital Zoom (Plus Video)

Most pocket cameras prominently advertise their optical zoom capabilities - "5X" or "10X" zoom generally means that you can focus the lens entirely on the centermost details of the original image, with higher zoom "X" numbers indicating that your lens can see smaller details when it's further away from your subject. In addition to helping you to properly frame close-up shots, optical zoom is particularly great at events or parks; it lets you capture an image of a bear's face without being captured by the bear, see a performer on stage from 50 rows back, or snap pictures of snow caps without actually having to climb the mountains they're on. Unfortunately, iOS devices don't have optical zoom abilities; instead, they all use digital zoom, which is a fake, junky alternative. Rather than actually magnifying a faraway subject, digital zoom merely enlarges the pixels Apple's camera normally captures at its fixed 35mm perspective. Activated with pinch gestures, digital zoom eliminates your need to crop the shot after taking it, but throws away all of the extra details surrounding your subject.



Snapseed Images

26-OCT-11 To: 27-OCT-11

Improving Bad Photographs With Apps

If you're using an iPhone 4 or iPhone 4S, your photos won't be embarrassingly shy of a decent pocket camera, so you'll be able to print or share them without much editing. But for older iPhones and the iPod touch, photo processing apps really help to make the sometimes grainy, murky images worth looking at. Above, you can see 15 different variations on photo #1, which was taken with a first-generation iPhone - as bad as Apple's cameras get, besides the iPod touch 4G. All of these variations were generated by Snapseed, a \$5 universal iOS app featured in our 100 Essential iOS Apps of 2011 section; Snapseed includes everything from frames and vintage color filters to different blur, sharpening, and texturing effects. The effects obviously make the original image look dramatically different - blurs and textures can reduce the obvious noise in dark shots, while contrast and saturation tweaks can help even brightly lit daytime shots look better. Other iOS apps offer different filters and effects; some are less expensive than SnapSeed, but few are as easy to use.

High-Res Panoramas

With help from a \$2 app called Pano (see the 100 Essential Apps of 2011, page 146), iPhones and iPod touches can create higher-resolution pictures. Pano snaps a series of portrait or landscape images, using a transparent overlay of your last shot to align the next one. It creates huge, detailed scenes with unusual width or height, as shown below.



07 WHERE TO BUY: NEW

TIPS FOR SAVING MONEY ON IPODS, IPHONES AND ACCESSORIES

Apple Stores almost always have the highest prices for iPods, iPhones, and accessories. Shop around and you can save nearly \$20 on an iPod purchase, with even bigger savings on add-ons. Here are examples of October 2011 prices at eight different retailers; note that major iPhone discounts are comparatively rare.

Item	Apple	Amazon	B&H Photo	Best Buy	Fry's	J&R Music	Target	Walmart
shuffle 2GB	\$49	\$46	\$47	\$47	\$45	\$49	\$45	\$46
nano 8GB	\$129	\$129	\$129	\$130	\$119	\$129	\$129	\$130
nano 16GB	\$149	\$149	\$149	\$150	\$139	\$149	\$149	\$150
touch 8GB	\$199	\$199	\$199	\$200	\$188	\$199	\$199	\$195
touch 32GB	\$299	\$275	\$275	\$300	\$275	\$299	\$275	\$280
touch 64GB	\$399	\$365	\$369	\$400	\$369	\$399	\$365	\$365
Beats Studio	\$300	\$299	\$299	\$300	\$300	\$299	\$273	N/A
iHome iP90	N/A	\$75	\$83	\$100	\$100	N/A	\$80	\$100
JBL OnStage IV	\$150	\$115	\$107	N/A	N/A	\$107	\$150	N/A
Free Shipping	\$50+ Int'l	\$25+ No	Yes NYC	Yes US/UK	No US	\$100+ NYC	\$50 US	No Int'l

Apple Store Has exclusives on engraved + certain colored iPods, sells iPhones, but charges full MSRP for almost everything it sells.	Amazon.com Pricing can be very aggressive. Free shipping, often no sales tax. But prices change often, sometimes hourly.	B&H Photo Video Reputable NY-based electronics dealer for decades. iPod prices aren't low, but it can be aggressive with accessories.	Best Buy Prices are \$1 higher than Apple's. Also sells iPhones at high prices. Rarely good prices for accessories.
Fry's Very aggressive iPod pricing. Poor in-store service/return hassles, but online's OK; shipping's extra. Weak accessories.	J&R Music World Another NYC-based retailer; no longer aggressive on iPod prices, but you may find a deal or two on iPod accessories.	Target iPods sometimes go on brief, impressive sales, as do certain accessories. Returns are easy if you're local, online's good.	Walmart Occasionally sells iPods/iPhones (!) at a nice discount, but charges for shipping. Sells too many low-quality accessories.



Start with Fry's if there's one nearby; Amazon and Target also offer particularly good deals.

Exclusives

Every year, Apple reserves one, two, or three iPod colors solely for sale in its own online and physical stores. As was the case starting in late 2010, the only special color today is the charitable (PRODUCT) RED iPod nano, from which Apple donates part of the profits to the Global Fund fighting HIV and AIDS in Africa. It's available in 8GB and 16GB capacities at the regular \$129 and \$149 prices. If you want to find past exclusive iPods, check the clearance section of Apple's online store, or eBay, where used models circulate en masse.

There are few truly retailer-exclusive accessories, and even fewer that can't eventually be found elsewhere after a limited period of time. For now, Apple sells a (PRODUCT) RED iPad Smart Cover as its only special edition accessory, and certain third-party accessories are stocked only by Apple as time-limited exclusives, sometimes six months. During that time, they typically sell at a steep premium relative to their value, and are discounted upon broader availability at other retailers. As a general rule, if an accessory's an Apple Store exclusive, you'll be better off financially if you wait six months and buy it elsewhere.



AppleCare & Gift Cards

Easy to buy and unquestionably useful, AppleCare (\$39-\$69) extends your iPod or iPhone 3GS/4's warranty to two total years of coverage at any time in the first year. AppleCare+ (\$99) for iPhone 4/4S adds accidental damage coverage at a cost of \$49 per incident. Apple's Store and iTunes Gift Cards (\$15 and up) or Amazon Gift Certificates offer the gift of choice.



Our Apple Product Buying Advice

You'll generally do best by shopping online, except when Apple devices are newly released. You'll almost always save money buying online versus a physical store - Apple included. But when new iPods or iPhones come out, Apple's the place to look.

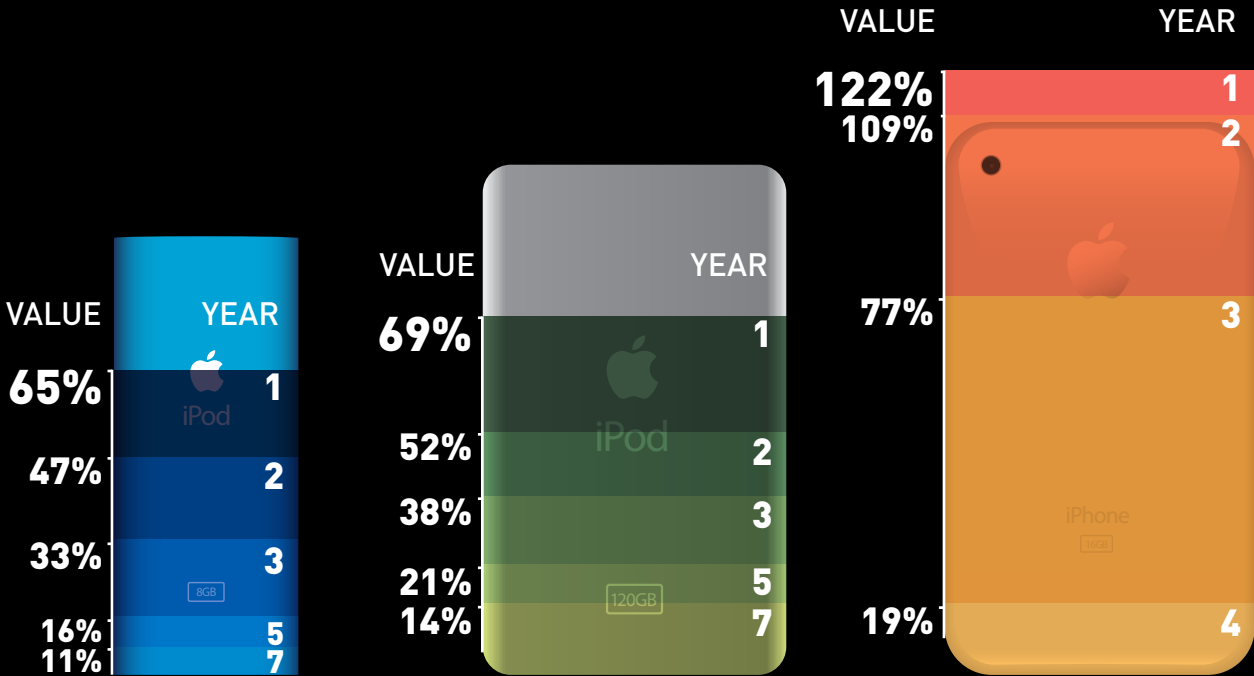
Save by waiting. Early in an iPod's life, \$5-\$10 off the MSRP is great, but months later, you may save more. iPhones are rarely if ever discounted - Walmart is one of the only stores with deals; AT&T may also cut prices.

Consider refurbished units. Defects and changes of heart lead to returns; bad devices have almost certainly been fixed and are awaiting resale from the Apple Store's Special Deals section at big discounts. AT&T's iPhone refurbs are often \$50-\$100 below their new prices.

08 BUY OR SELL - USED

LEARN THE VALUE OF YOUR IPOD, IPHONE, OR APPLE TV

iPods and iPhones lose value differently: most iPods retain 60-70% of their value after a year, but year-old iPhones can fetch even more than their subsidized prices, particularly if sold unlocked. Here's how to estimate your device's worth at various intervals after the date of release, based on years of eBay price tracking.



iPod mini/nano

Historically, Apple's least expensive iPods lose value at least a little more quickly than full-sized models. Certain colors may hold value longer. Cheap iPod shuffles fall more quickly.

Full-sized iPods

Not surprisingly, iPods, iPod classics, and iPod touches with more capacity fetch higher dollars later. Rare first-gen iPods are now climbing in value, as are second-gen iPods. U2 iPods also hold slightly greater value.

iPhones

Apple hasn't stopped selling the iPhone 3GS or iPhone 4, and used, unlocked models keep fetching hundreds of dollars - even more than their subsidized contract prices. Only the original iPhone has crashed in value.



Selling prices are much higher for boxed, perfect condition iPods than for scratched, engraved, or non-functional ones; unlocked iPhones fetch higher prices than locked ones.

Every Discontinued iPod, iPhone, and Apple TV: Details + eBay Prices

On the pages that follow, you'll see every discontinued iPod, iPhone, and Apple TV, along with its storage capacity or capacities, release date, and original price. Since several factors can influence the used value, we've listed each one's new features, pack-ins, and major issues/problems, along with late October 2011's average eBay selling price for each specific model number. Different models can denote small or large changes, so check the Apple part number on the back or bottom of your box before buying or selling.



iPod (1G)

10-2001

5/10GB - 10 Hr Battery
Music - Data
\$399-\$499 US

Breakthroughs: Apple's original cigarette pack-sized 5GB music player uses intuitive five buttons and moving wheel controls plus an easy-to-read white backlit screen, features iconic clear/white plastic and polished steel case design. Works as Mac hard disk.

Pack-Ins: FireWire-to-FireWire cable, original FireWire wall charger, original iPod earphones.

Issues: High price, Mac only, limited battery life. Retrospectively fewer add-ons than newer iPods, in part because of lack of bottom connector and missing USB support.

eBay Values:
5GB (M8513LL/A, M8541LL/A, M8697LL/A) \$177.36
10GB (M8709LL/A) \$99.45

Our Advice: Buying Used

Once every two or so years, Apple replaces a popular model with something new that's not as good in some way, letting older models remain viable. The sixth-generation iPod nano lost video and camera features, and the third-generation iPod shuffle lost all buttons, making earlier models valuable. Similarly, the 2008 iPods discontinued support for popular charging accessories, making older models easier to use with prior Apple and third-party gear. But before you buy a used iPod, factor in the cost of a replacement battery, the warranty, and the cool factor of having something new. You can decide whether a new or used device is best for your needs.

Our Advice: Selling Used

- Sell your old device right before Apple replaces it. "Old" models lose \$\$\$ fast.
- Include the model number in the title.
- Indicate quality in the listing. If you say "as-is," expect to get less.
- Unlock your iPhone before listing it.
- Use Apple's official photo on the search page. This oddly helps prices.
- Keep your box and pack-ins. People pay more for the complete package.
- Don't bundle other add-ons. They won't help your price; sell separately.
- Include photos of all the included items. People want to see them.
- Don't include "Windows/Mac" in title.
- Charge reasonable shipping. You'll get much less if you overcharge.



iPod (2G)

7-2002

10/20GB - 10 Hr Battery
Music - Data
\$399-\$499 US

Breakthroughs: Moving scroll wheel replaced with touch-sensitive surface. Separate PC versions introduced, enabling PC users with FireWire ports to transfer music with MusicMatch software. Peak capacity upped to 20GB with old 5GB falling to \$299.

Pack-Ins: FireWire cable, wall charger, original iPod earphones, carrying case, remote control.

Issues: High price, FireWire standard isn't PC-friendly, limited battery life.

eBay Values:
10GB (M8737LL/A, M8740LL/A) \$73.27
20GB (M8738LL/A, M8741LL/A) \$95.20



iPod (4G/U2)

7/10-2004

20/40GB - 12 Hr Battery
Music - Photos* - Games* - Data
\$299-\$399 US

Breakthroughs: Replaces separate touch-sensitive buttons and wheel of third-generation iPod with iPod mini's Click Wheel controls, improves battery life, adds USB cable. Black and red U2 iPod debuts for the first time as alternative to the classic white full-sized iPod.

Pack-Ins: 2003 iPod earphones, USB and FireWire cables, wall charger. Dock included with top model.

Issues: Slight cheapening of prior iPods' looks.

eBay Values:
20GB (M9282LL/A) \$46.78
U2 (M9787LL/A) \$72.98
40GB (M9268LL/A) \$59.39



iPod (3G)

4-2003

10/15/20/30/40GB - 8 Hr Battery
Music - Photos* - Games* - Data
\$299-\$499 US

Breakthroughs: Touch-sensitive buttons, thinner casings, USB support, top + bottom accessory ports, photo transfer + mic add-ons, big drives, games.

Pack-Ins: FireWire cable, adapter, wall charger, and new earphones. Some inc. dock, case, and remote.

Issues: Weaker batteries, screen backlight variations.

eBay Values: 10GB (M8976LL/A) \$44.50
15GB (with Dock, M8946LL/A) \$70.63
15GB (w/o Dock, M9460LL/A) \$43.33
20GB (M9244LL/A) \$77.44
30GB (M8948LL/A) \$60.00
40GB (M9245LL/A) \$77.00

iPod photo (aka iPod 4G with color)

10-2004

20/30/40/60GB - 15 Hr Battery
Music - Photo - Games* - Data
\$499-\$599 US

Breakthroughs: Takes iPod 4G, improves battery, adds color screen for photo display. Higher storage capacity. Originally called iPod photo, later renamed to just iPod.

Pack-Ins: 2003 iPod earphones, USB cable, wall charger. Dock, AV cable, FW cable with certain models.

Issues: Photo sync is slow, display requires add-ons.

eBay Values:
20GB (Color, MA079LL/A) \$45.80
20GB U2 (Color, MA127LL/A) \$66.32
30GB (Photo, M9829LL/A) \$47.24
40GB (Photo, M9585LL/A) \$57.40
60GB (Photo/Color, M9586LL/A, M9830LL/A) \$69.69

iPod mini (1G)



2-2004

4GB - 8 Hr Battery
Music - Games* - Data
\$249 US

Breakthroughs: Microdrive storage creates smallest iPods ever, with 5 new body colors and tiny Click Wheel controller, integrating all buttons into one surface.

Pack-Ins: 2003 iPod earphones, belt clip, USB and FireWire cables, wall charger.

Issues: Low capacity per dollar, limited battery life, not designed for use with photo sync or recorder add-ons.

eBay Values: 4GB Silver (M9160LL/A) \$26.44
4GB Blue (M9436LL/A) \$25.79
4GB Pink (M9435LL/A) \$23.49
4GB Green (M9434LL/A) \$27.25
4GB Gold (M9437LL/A) \$30.04

iPod shuffle (1G)



1-2005

512MB /1GB - 12 Hr Battery
Music - Data
\$99-\$149 US

Breakthroughs: A complete music player in the space of a pack of chewing gum, with simple USB plug. Wearable, using ultra-simplified controls: a large play button surrounded by track skip and volume buttons. "Shuffle" mode plays music out of order.

Pack-Ins: 2003 iPod earphones, lanyard necklace.

Issues: Screenless interface falls below competitors' lowest-end offerings, highly limited storage capacity, no iPod accessory compatibility.

eBay Values:
512MB (M9724LL/A) \$15.94
1GB (M9725LL/A) \$22.00

iPod mini

(2G)



2-2005

4/6 GB - 18 Hr Battery
Music - Games* - Data
\$199-\$249 US

Breakthroughs: Radically improved battery life and lower price than prior mini; brighter body colors.

Pack-Ins: USB cable, belt clip, 2003 iPod earphones.

Issues: No longer includes wall charger, value so-so.

eBay Values: 4GB Silver (M9800LL/A)	\$28.89
4GB Blue (M9802LL/A)	\$27.95
4GB Pink (M9804LL/A)	\$31.69
4GB Green (M9806LL/A)	\$29.39
6GB Silver (M9801LL/A)	\$36.44
6GB Blue (M9803LL/A)	\$38.37
6GB Pink (M9805LL/A)	\$32.80
6GB Green (M9807LL/A)	\$29.82

iPod nano

(1G)



9-2005

1/2/4 GB - 14 Hr Battery
Music - Photos* - Games* - Data
\$149-\$249 US

Breakthroughs: Thinnest iPod ever, now with mini-besting color screen and photo display feature.

Pack-Ins: USB cable, 2003 iPod earphones, dock adapter, simple carrying case (added late 2005).

Issues: Lower battery life and storage than same-priced minis, scratchable body, no top add-on port.

eBay Values: 1GB Black (MA352LL/A)	\$21.26
1GB White (MA350LL/A)	\$26.51
2GB Black (MA099LL/A)	\$26.98
2GB White (MA004LL/A)	\$29.31
4GB Black (MA107LL/A)	\$33.07
4GB White (MA005LL/A)	\$43.39

iPod

(5G)



10-2005

30/60 GB - 14-20 Hr Battery
Music - Photos - Games - Data
\$299-\$399 US

Breakthroughs: Screen size boosted to 2.5", video and downloadable game playback added. Interface modestly improved. First all-black full-sized iPod model.

Pack-Ins: iPod earphones, USB cable, simple case.

Issues: Short video play time, limited formats. Abandons top-mounted accessories, obsoleting many top add-ons.

eBay Values: 30GB White (MA002LL/A)	\$69.57
30GB Black (MA146LL/A)	\$66.56
U2 (MA452LL/A)	\$100.67
60GB White (MA003LL/A)	\$80.84
60GB Black (MA147LL/A)	\$83.22

iPod nano

(2G)



9-2006

2/4/8 GB - 24 Hr Battery
Music - Photos - Games* - Data
\$149-\$249 US

Breakthroughs: Thinner and less scratchable nano in 6 colors. Much-improved battery, new voice recording feature, impressive new black and red aluminum versions introduced. Marked the debut of the PRODUCT (RED) iPod nano, the first in a series of charitable iPods.

Pack-Ins: USB cable, 2006 iPod earphones.

Issues: Color choices limited by price and capacity, problems with prior nano accessories.

eBay Values: 2GB Silver (MA477LL/A)	\$34.50
4GB (MA426LL/A, MA428LL/A, MA489LL/A, MA487LL/A, MA725LL/A)	\$41.95
8GB (MA497LL/A, MA899LL/A)	\$72.34

iPod

(5.5G)



9-2006

30/80 GB - 14-20 Hr Battery
Music - Photos - Games - Data
\$249-\$349 US

Breakthroughs: Brighter screen, better video battery life, search feature, superior prices for capacities, highest capacity yet in the iPod family.

Pack-Ins: 2006 iPod earphones, USB cable, simple case.

Issues: Limited video formats, screen size still small by comparison with other portable video devices. Almost physically indistinguishable from prior model.

eBay Values: E30GB (MA444LL/A, MA446LL/A)	\$87.62
E30GB U2 (MA664LL/A)	\$144.76
E80GB (MA448LL/A, MA450LL/A)	\$91.63

iPod shuffle

(2G)



11-2006

1/2 GB - 12 Hr Battery
Music - Data
\$79 US (1GB), Later \$49 -\$69

Breakthroughs: Apple's smallest, most wearable iPod to date, available in multiple colors (five per season), each with rear belt clip. Metal replaces earlier plastic.

Pack-Ins: 2003 or 2007 iPod earphones, USB dock.

Issues: Audio distortion and weak accessory support. Can't charge and play audio at the same time.

eBay Values: 1GB (MA564LL/A, MA949LL/A, MA951LL/A, MA953LL/A, MA947LL/A, MB225LL/A, MB227LL/A, MB229LL/A, MB233LL/A, MB231LL/A, MB225LL/A, MB815LL/A, MB813LL/A, MB811LL/A, MB817LL/A)	\$24.01
2GB (MB518LL/A, MB520LL/A, MB522LL/A, MB526LL/A, MB524LL/A, MB518LL/A, MB683LL/A, MB685LL/A, MB681LL/A, MB779LL/A)	\$26.11

Apple TV

(40GB/160GB)



2-2007

40/160 GB

Music - Video - Photos

\$299-\$399 US,

Later \$229-\$329

Breakthroughs: First standalone high-definition (720p) iTunes video player; first iTunes family device capable of streaming video from a computer, first with on-screen menu UI for browsing media content.

Pack-Ins: Apple Remote, power cable.

Issues: Only useful with HDTVs, limited features, buggy software, user interface clunky in mid-cycle.

eBay Values:

40GB (MA711LL/A)	\$66.63
160GB (MB189LL/A)	\$96.20

iPhone

(1G)



6-2007

4/8/16 GB - 7-24 Hr Battery

Phone - Music - Video - Internet
\$399-\$599 US

Breakthroughs: Apple's first mobile phone, combining a multi-touch widescreen iPod, quad-band GSM phone, and EDGE/Wi-Fi Internet device in a metal and glass enclosure.

Pack-Ins: Stereo headset with microphone, iPhone Dock, USB Power Adapter, USB Cable, cleaning cloth.

Issues: Initially limited storage capacity at high prices, slow EDGE data speeds, and reliability problems. Phones are sold locked, and initially without third-party applications.

eBay Values:

4GB (MA501LL/A - Unlocked)	\$100.78
8GB (MA712LL/A - Unlocked)	\$85.95
16GB (MB384LL/A - Unlocked)	\$129.01

iPod classic

(80GB/120GB/160GB)



9-2007

80/160 GB - 30-40 Hr Battery

Music - Video - Games - Data

\$249-\$349 US

9-2008 120GB Model \$249 US

Breakthroughs: First hard disk iPod with silver or black metal face, new interface with Cover Flow, dramatically better audio, battery life and storage capacity for the prices.

Pack-Ins: iPod earphones, USB cable, Dock Adapter.

Issues: Screen comparatively outdated. Lost compatibility with all prior video accessories.

eBay Values:

80GB Silver (MB029LL/A)	\$95.79
80GB Black (MB147LL/A)	\$100.89
160GB Silver (MB145LL/A)	\$146.32
160GB Black (MB150LL/A)	\$149.25
120GB Silver (MB562LL/A)	\$119.90
120GB Black (MB565LL/A)	\$123.88

iPod nano

(3G)



9-2007

4/8 GB - 24 Hr Battery

Music - Video - Games - Data
\$149-\$199 US

Breakthroughs: First iPod nano with video playback and true game-playing abilities, using same resolution screen and UI as iPod classic.

Pack-Ins: USB cable, iPod earphones, Dock Adapter.

Issues: Color limited by price, body shape a little odd.

eBay Values:

4GB Silver (MA978LL/A)	\$48.07
8GB (MA980LL/A, MB249LL/A, MB253LL/A, MB261LL/A, MB257LL/A, MB453LL/A)	\$55.25

iPod touch

(1G)



9-2007

8/16/32GB - 22 Hr Battery

Music - Video - Games - Internet
\$299-\$499 US

Breakthroughs: First iPod with Wi-Fi, multi-touch, Internet access, and iPhone OS, gaining ability to download music and games, read e-mail, browse web.

Pack-Ins: Earphones, USB cable, stand, dock adapter, screen cleaning cloth.

Issues: Screen quality issues. Higher price, much lower storage capacity, lower battery life, and lower audio quality than iPod classic. Paid \$10-\$20 software updates required to add new system software.

eBay Values:

8GB (MA623LL/A)	\$84.07
16GB (MA627LL/A)	\$88.20
32GB (MB376LL/A)	\$120.90

iPhone 3G



6-2008

8/16GB - 24 Hr Battery

Phone - Music - Video - Internet

\$199-\$299 US, Later 8GB \$99 US

With 16GB Model Discontinued

Breakthroughs: Faster second-generation update to original iPhone, adding support for third-party apps, dramatically expanding international distribution and compatibility with 3G cellular networks.

Pack-Ins: Stereo Headset with microphone, USB Power Adapter, USB Cable, cleaning cloth, SIM tool.

Issues: Cheaper-looking and -feeling plastic casing than prior iPhone, weak battery life for 3G calling and data services. Primarily sold locked to specific carriers for \$199/\$299 prices; unlocked retail prices are considerably higher, reflecting a carrier subsidy of roughly \$400.

eBay Values: 8GB Black (MB702LL/A)	\$171.80
16GB Black (MB704LL/A)	\$173.58
16GB White (MB705LL/A)	\$234.33

iPod nano

(4G)



9-2008

8/16 GB - 24 Hr Battery
Music - Video - Games - Data
\$149-\$199 US

Breakthroughs: Nine colors available for each capacity; first nano to include accelerometer.

Pack-Ins: USB cable, iPod earphones, Dock Adapter.

Issues: Dull knife body shape, incompatible with FireWire.

eBay Values:

8GB (MB598LL/A, MB754LL/A, MB732LL/A, MB739LL/A, MB735LL/A, MB751LL/A, MB742LL/A, MB748LL/A, MA745LL/A) \$64.11
16GB (MB903LL/A, MB918LL/A, MB905LL/A, MB909LL/A, MB907LL/A, MB917LL/A, MB911LL/A, MB915LL/A, MA913LL/A) \$91.05

iPod touch

(2G)



9-2008

8/16/32GB - 30 Hr Battery
Music - Video - Games - Internet
\$229-\$499 US, Later \$199 (8GB)
With 16/32GB Discontinued

Breakthroughs: First iPod with integrated speaker, Nike + iPod wireless built-in, free support for third-party apps, new headphone port with mic support.

Pack-Ins: iPod earphones, USB cable, Dock Adapter, cleaning cloth.

Issues: Still relatively low capacity for prices, battery life doesn't rival iPod classic. Incompatible with FireWire accessories. Requires paid software updates from Apple, ranging from \$5-\$10. Almost indistinguishable from late 2009 32/64GB models.

eBay Values: 8GB (MB528LL/A-MC086LL/A) \$110.71
16GB (MB531LL/A) \$113.28
32GB (MB533LL/A) \$138.17

iPhone 3GS



6-2009

16GB/32GB - 24 Hr Battery
Phone - Music - Video - Internet
\$199-\$299 US / 2010 \$99 US 8GB
As 16/32GB Models Discontinued
Late 2011 8GB \$0 With Contract

Breakthroughs: Faster sequel to iPhone 3G, 3-Megapixel autofocus camera, compass, Voice Control, improved 3-D graphics capabilities.

Pack-Ins: Earphones with Remote + Mic, USB Power Adapter, USB Cable, SIM removal tool.

Issues: Weak battery, most sold locked to specific carriers.

eBay Values:

16GB Black (MB715LL/A) \$246.72
16GB White (MB716LL/A-MC132LL/A) \$240.14
32GB Black (MB717LL/A) \$281.10
32GB White (MB718LL/A-MC138LL/A) \$293.17

iPod touch

(3G)



9-2009

32/64GB - 30 Hr Battery
Music - Video - Games - Internet
\$299-\$399 US

Breakthroughs: First iPod with Voice Control, faster CPU and graphics chip for improved 3-D gaming performance, superior battery life.

Pack-Ins: Earphones with Remote + Mic, USB cable, Dock Adapter.

Issues: Still relatively low storage capacity for prices relative to iPod classic. Almost indistinguishable from late 2008 models; camera removed at last minute.

eBay Values:

32GB (MC008LL/A) \$162.66
64GB (MC011LL/A) \$184.89

iPod shuffle

(3G)



3-2009

2/4 GB - 10 Hr Battery
Music - Data
\$59-\$99 US

Breakthroughs: Apple's smallest iPod ever, and first to eliminate all buttons in favor of a single switch and remote control headset. Originally introduced in aluminum, later gained first all-stainless steel model.

Pack-Ins: Earphones with Remote, 3.5mm-USB cable.

Issues: Difficult to control, weak battery life, plain design, earphones had moisture failures and a recall.

eBay Values:

2GB (MC306LL/A, MC384LL/A, MC381LL/A, MC323LL/A, MC387LL/A) \$24.22
4GB (MB867LL/A, MC328LL/A, MC307LL/A, MC331LL/A, MC164LL/A) \$32.11
4GB Stainless Steel 9/09 (MC303LL/A) \$28.75

iPod nano

(5G)



9-2009

8/16 GB - 24 Hr Battery
Music - Video - Games - Data
\$149-\$179 US

Breakthroughs: First nano to include video camera, pedometer, and FM radio, new glossy aluminum body.

Pack-Ins: USB cable, iPod earphones, Dock Adapter.

Issues: Mediocre camera quality, weak selection of games, tiny Click Wheel controls. Some color options aren't as impressive as prior year's.

eBay Values:

8GB (MC027LL/A, MC031LL/A, MC037LL/A, MC034LL/A, MC050LL/A, MC049LL/A, MC046LL/A, MC043LL/A, MC040LL/A) \$82.01
16GB (MC060LL/A, MC062LL/A, MC066LL/A, MC064LL/A, MC075LL/A, MC074LL/A, MC072LL/A, MC070LL/A, MC068LL/A) \$111.82

iPhone 4



6-2010

16GB/32GB - 24 Hr Battery
Phone - Music - Video - Internet
\$199-\$299 US / 2010 \$99 US 8GB
As 16/32GB Models Discontinued

Breakthroughs: First Apple device with Retina Display, 5MP rear camera, and FaceTime camera. First iPhone with 802.11n, and first iPhone with white front bezel. Subsequently released Verizon iPhone 4 is first iPhone with CDMA network support.

Pack-Ins: Earphones with Remote + Mic, USB Power Adapter, USB Cable. Some include SIM card/SIM tool.

Issues: Fragile glass body; signal issues with metal antenna. Introduced later, Verizon/CDMA model needs clear ESN for activation when resold.

eBay Values: 16GB Black (MC318LL/A)	\$317.49
16GB Black, Unlocked (MC603LL/A)	\$488.97
16GB White (MC536LL/A)	\$384.48
16GB White, Unlocked (MC604LL/A)	\$539.96
32GB Black (MC319LL/A)	\$320.11
32GB Black, Unlocked (MC605LL/A)	\$550.23
32GB White (MC537LL/A)	\$405.56
32GB White, Unlocked (MC606LL/A)	\$644.29
16GB Black CDMA (MC676LL/A)	\$316.33
16GB White CDMA (MC677LL/A)	\$301.46
32GB Black CDMA (MC678LL/A)	\$328.34
32GB White CDMA (MC679LL/A)	\$374.31

Apple TV (2G)



9-2010

8 GB
Music - Video - Photos
\$99 US

Breakthroughs: Dramatically smaller iTunes video streaming device at a considerably lower price than the original version. Originally pitched as a dedicated video rental box without purchasing capabilities, using much-improved user interface relative to prior Apple TV. Software updates following initial release fundamentally improved the device, enabling it to purchase videos from iTunes, stream videos, photos, and music from iOS devices, and stream everything from sporting events to Wall Street Journal content.

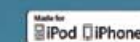
Pack-Ins: Apple Remote, power cable.

Issues: Only useful with HDTVs. No user-accessible on-board storage, and thus completely Internet connection-dependent for playing back content. Capped at 720p for video output while rivals reach 1080p. No RCA-style connectors for audio or video.

eBay Values:	
Apple TV 2G (MC572LL/A)	\$79.89

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This is a great time to accessorize your iPhone or iPod, particularly if you've wanted new speakers, headphones, or the ability to watch your videos on an HDTV.

Innovation and competition have really moved the iPhone and iPod accessory market forward after a couple of slow years. The accessories on the pages that follow are some of the best and most polished we've ever tested, despite arriving at prices that only three or four years ago would have purchased much less.

The only area that's been somewhat disappointing over the past year has been car accessories, which have only modestly improved since the original iPhone was released in 2007. Today's car mounts and chargers look a lot like last year's, though in-car wireless streaming and speakerphone solutions have recently become a lot better, as have the cars.

In addition to a section on the increasingly great Apple TV - now truly the ultimate iPod/iPhone accessory - we've added new sections this year to spotlight the phone extenders, hard drives, health accessories, and wireless toys that have recently debuted for iOS devices. Other top picks include new cases, earphones, speakers, and battery packs, all of which make great gifts or treats for your own personal use.

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the ipod + iphone accessory guide

00 THE BIG PICTURE

A FEW THINGS WORTH KNOWING ABOUT IPHONE + IPOD ADD-ONS

The iPhone and iPod work wonderfully straight out of their packages, but with accessories, they can do so much more. Speakers and headphones bring out the best in your music; batteries can keep them running for days at a time, and cases protect them from drops and scratches. Here's the big picture of what's out there.

Cases and Protective Film: Why Do They Matter?

Apple deliberately chooses attractive but fragile materials for its portable devices, seemingly to keep people hungry for shiny new versions every couple of years. The metal backs of full-sized iPods are durable but scratchable, while the glass screens and bodies of iPod touches and iPhones are highly susceptible to fingerprints and shattering. Cases and film keep Apple's devices looking fresh, reduce the need for cleaning, and improve their resale value.



What's Changed In Accessories Over The Past Year?

Cases have become even more diverse in materials and designs than before, including multi-colored and deep-textured plastics, fancier fabrics, carbon fiber elements, Swarovski crystals, and more. Hybrid rubber and hard plastic cases from Speck and Otterbox have been particularly popular, with many new clones of the famous CandyShell and Defender Series cases, both in this Guide. Battery cases have grown in popularity for iPhones that need the extra juice.

Speakers used to be very focused on electronic iPod/iPhone docks, but are increasingly moving towards wireless streaming, with support for either Bluetooth or Apple's AirPlay. Wireless headphones are becoming more common, but headphone makers have focused more on fashionable wired designs, ranging from super-cheap to unusually expensive. The Apple TV has become a nearly must-have accessory for iOS users, and new types of wireless toys, hard drives, and universal remotes have become increasingly common.

What Are The "Sweet Spot" Prices For Different Types Of Accessories?

These guidelines can help you budget for quality options; some top picks are more or less.



Cases

\$30-\$35 for a case, \$15 for screen film.

Headphones

\$100: Good, \$200: Great, \$500: Wicked.

Batteries

\$60 for the battery, \$80 for a battery case.

Speakers

\$100 for clocks, \$200 to \$300 for tabletops.

What Types Of iPod and iPhone Speakers Should I Consider?

There are so many shapes, sizes, and prices of speakers these days that there's no single correct answer. Decide first whether you plan to keep your speaker in one place or move it around, then how much you're willing to spend to buy one or more systems for your needs. If bedside listening is your goal, consider docking clock radios. Nicer portable or wireless speakers may sound better. Dedicated tabletop speakers often sound best, but are larger.



Portables

Generally \$50 to \$200, these speakers run off of batteries, and offer compromised audio quality in favor of smaller sizes and lighter-weight materials. Great for on-the-go use, less ideal indoors.

Clock Radios

For \$50 to \$150, these boxy systems add alarms, bright clock screens, and AM/FM radios to a set of two or four speakers. Rarely portable, they charge, play music, and wake you up from a nightstand.

Tabletop Audio

Typically \$150 to \$600, these systems combine multiple speakers and an iPod/iPhone dock to produce better sound than portables or clock radios. Super high-end versions can be furniture-sized.

Wireless Audio

Now designed for iOS devices, these Bluetooth or AirPlay speakers stream audio without requiring a device to dock; some have docks, others don't. They most often range from \$100 to \$600.

What's Included and What's Left Out Of This Year's Buyers' Guide?

We focus heavily on iPhone and iPod products that were introduced over the last year, as prior accessories have been featured in our iPad 2 Buyers' Guide and our 2011 Buyers' Guide. Accessories for the iPod classic and iPhone 3GS have barely changed at all over the past couple of years, and top prior picks can be found in our 2009-2010 Buyers' Guides.



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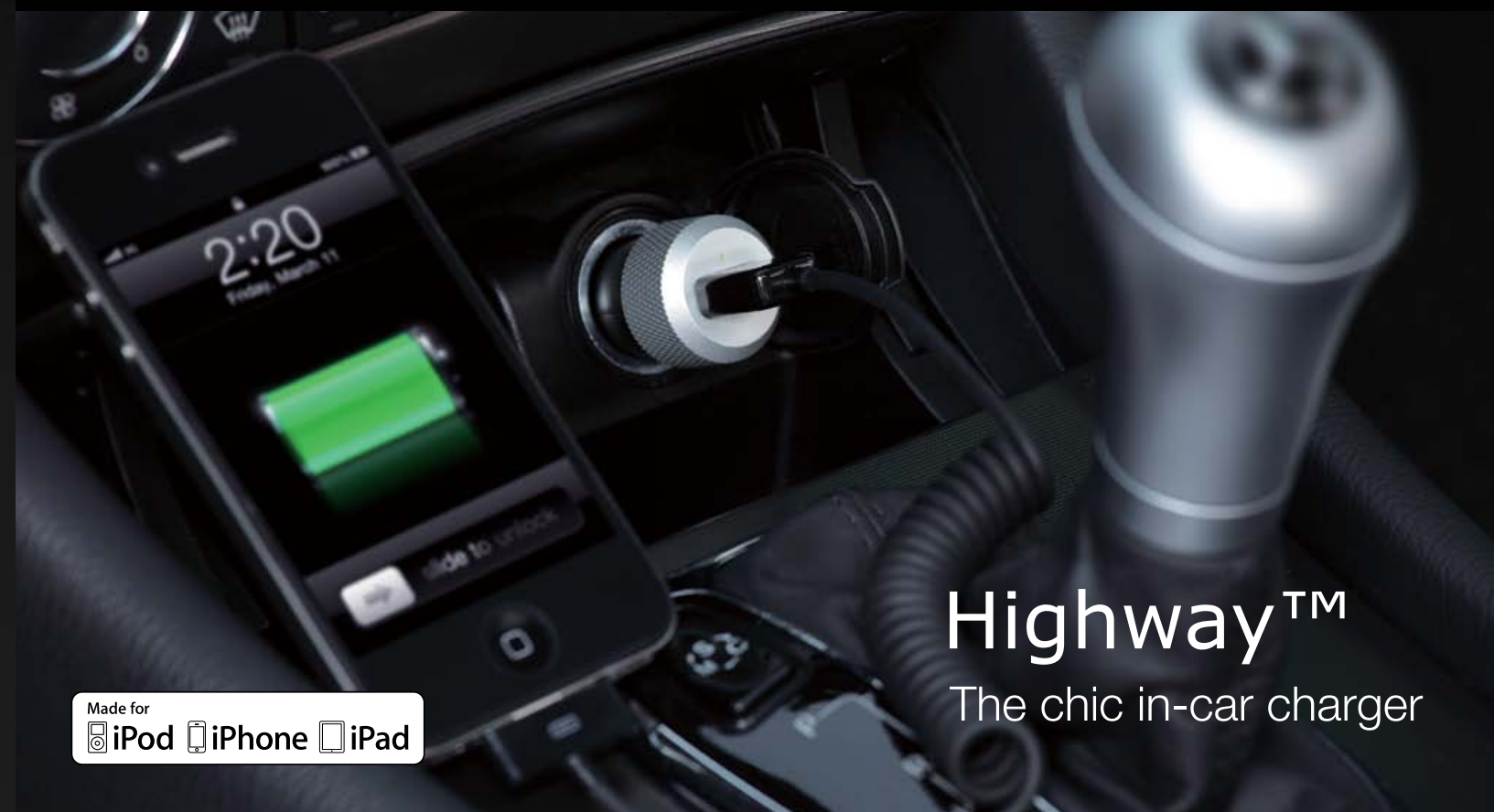
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01 CHARGERS + DOCKS

FROM SIMPLE CABLES TO POWER STATIONS

Every Apple portable device has a rechargeable battery inside. The only way to charge it is to connect to a power source - generally a wall outlet or computer.

All iPhones and most iPods have a "Dock Connector" port on their bottoms - a wide rectangular box with 30 pins that can transfer power, data, audio, and video to and from connected devices. (Only iPod shuffles charge and sync through special dual-purpose headphone ports.) Apple includes one computer-ready USB cable with each of its devices, and sells spares for \$19 each. USB Power Adapters sell for \$29 each. Apple Docks to hold iPods or iPhones upright sell for \$29-\$59.

In late 2011, Apple's iOS 5 changed how iPhones and iPod touches interact with computers: they can now wirelessly synchronize with PCs or Macs running iTunes, automatically when connected to wall power. This gives you the freedom to buy multiple chargers, docks, or docking devices such as speakers, and enjoy an up-to-date device wherever it may be resting. iPod shuffles, nanos, and classics - as well as pre-iOS 5 iPod touches and iPhones - remain computer-dependent.



You can now put dock or wall adapter dollars towards a charging speaker system, instead.



Apple iPod shuffle USB Cable

Designed solely for this tiny iPod, this is actually a set of two cables: one's 1.6" long like the one in shuffle's box, the other's 39" long, for an easy, durable connection to the back of a computer.

\$19



Griffin 3-Meter Cable

If you really need something longer than Apple's packed-in Dock Connector cables, this is the best option we've tested; the 10-foot cable is thick and durable, ready to charge and sync iPhones, iPods + iPads quickly.

\$30



Fuse PowerSlice

Uniquely designed as a dish with three removable "slices" that can hold different devices - two iPhones/iPods and a wireless headset, for example - this multi-device charges saves space by holding everything upright together. Fuse packs each PowerSlice with two device slices of your choice, and one wall power adapter.



\$45



CableJive xlSync

Shorter than Griffin's 3-Meter Cable and not quite as fast at recharging an iPad/iPad 2, this 6-foot alternative is more affordable: it's less expensive than Apple's 3-foot cables, and virtually identical cosmetically. The Dock Connector plug is highly accessory-compatible; it's sold in white or black versions, too.

\$13



Apple Universal Dock (2010)

Updated last year, the official Apple dock is now bundled with a wall adapter, USB to Dock Connector cable, silver Infrared remote control, and snug inserts for recent iPhones and iPods. If you're looking for a way to get pristine analog audio out of your device, there's a 3.5mm port on the back; iOS devices can also recharge while syncing or wirelessly streaming media.

\$59

Macally KeySync

Users seeking the smallest Dock Connector cable option around need look no further than this iPod nano-sized keychain, which contains a full-sized USB plug and a Dock Connector plug on its two ends. Scosche was earlier to market with its more handsome FlipSync and ClipSync, but Macally's version is priced better.

\$15



02 BATTERIES

BATTERY CASES + POWER PACKS

If you need to refuel your iPhone or iPod while you're away from a wall outlet or car, you have three options: a Dock Connector-equipped battery pack, a USB-based battery pack, or a battery case that's specific to one iPhone/iPod model.

Dock Connector-equipped battery packs tend to be unwieldy, jutting out of the iPhone's or iPod's bottom while they charge. Companies such as Essential TPE have tried to make these batteries look interesting, as shown above left, but they are inconvenient unless you leave your now super-tall device sitting on a table.

USB-based battery packs typically include Dock Connector cables, so you can recharge your iPhone or iPod at a distance. These packs often deliver peak power for the dollar, and work with tons of devices, but force you to manage cables.

Battery cases trade power capacity for thinness. They're easy to carry, but block the Dock Connector, preventing you from using docking accessories. Since the case only fits one iPhone or iPod body, it may stop being useful when you upgrade.



Packs are better for frequent upgraders, but battery cases are convenient for daily use.



Mophie Juice Pack Air for iPod touch 4G

Affordable, attractive, and protective, this is the rare battery case designed specifically for the current iPod touch. Capable of adding over 80% additional life to the touch's built-in battery, this provides full headphone and speaker access; you only need to remove it when using Dock Connector-based speakers and docks.

\$50

Third Rail Slim Case

Straddling the line between case and battery case, Third Rail Mobility's design lets iPhone 4/4S users enjoy the benefits of a nice case even when they don't want to tote the detachable cell around. Expect around 60% extra life from each battery; extras can be had for \$60 a piece, and the batteries can be stacked or used as standalone USB chargers.



\$90



Kensington BungeeAir Power

Doubling as a light security system, this iPhone 4/4S battery case offers over 70% extra power, plus a keychain fob that lets you know when your iPhone or keys move out of a 50-foot range.

\$100



Just Mobile Gum Plus

If you're not looking for a battery case, this device-agnostic USB battery pack offers a ton of power - enough to recharge any iPhone at full speed two or three times, and virtually any iPod four or more times. While Gum Plus is more expensive than Just Mobile's Gum Pro, only Plus charges iPhones at full speed. It's also made of aluminum, available in different colors, and bundled with a carrying pouch and all the cables you need.

\$70



PhoneSuit Elite

With the best combination of power and pricing we've seen for the iPhone 4/4S, this battery case delivers over 100% extra power, very quickly for a depleted device. It's also thinner than cases with smaller batteries.

\$80

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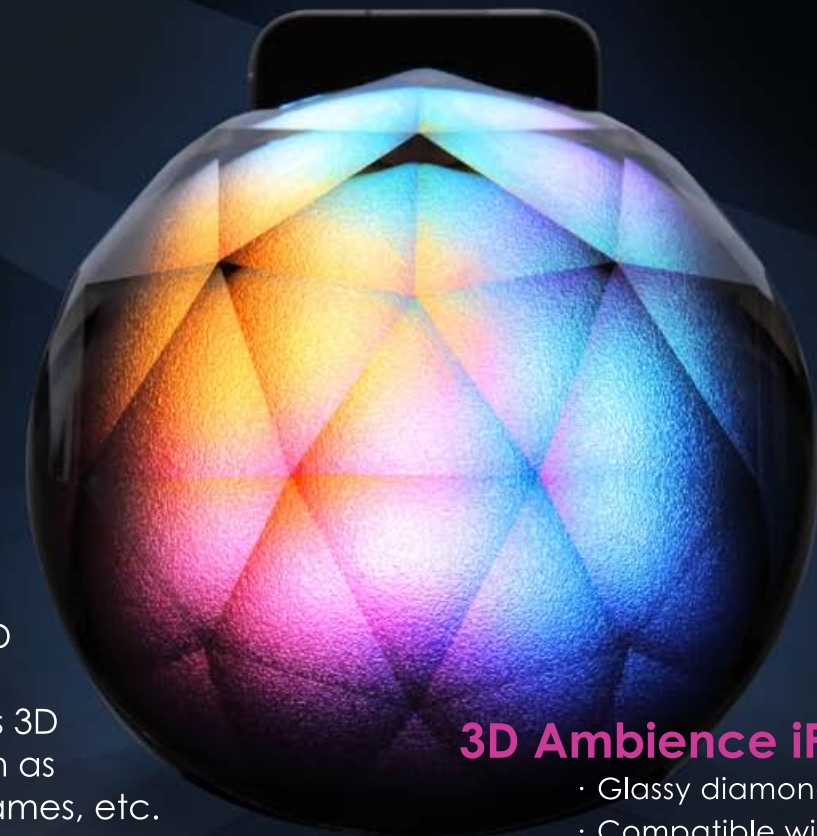
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BLACK DIAMOND

Acase

www.apluscase.com.tw

This dock is not just an iPhone Charger; it can also be your speaker, alarm clock, and even an ambience lighting gadget. The diamond design and the special layer inside allow soft light in dark. With its built-in LED light and the free BD App, this dock is available for various 3D lighting effects, such as rainbow, plasma, flames, etc.



3D Ambience iPhone Dock

- Glassy diamond design dock
- Compatible with ALL iPhone series (iPhone/ iPhone 3G / 3GS / 4 / 4S)
- Support 3.5mm USB jack
- Light, Music, Charge, Sleep, Wake functions

APLUS SHIELD Anti-Glare

100% NO bubbles screen protector

The Acase newly launched EZ-install screen protector gives you a whole new experience of installing a screen protector, you can be a professional even if you never install any screen protector. All you have to do is clean the dust on the screen and follow the instructions on the package. It turns out to be so simple to install a screen protector, while you don't have to worry about the bubbles.

- Compatible with iPad2 Wi-Fi / 3G
- EZ-INSTALL, 100% no bubble, high transparency and anti-glare.
- Two color options: Black/ White
- Ultra thin film with merely 0.188mm thickness

CRYSTAL STYLUS

The whole new capacitive stylus from Acase has crystal shaft and durable rubber tip with high sensitivity. It is not just beautiful, but it is also strong enough to resist wear and tear after 100,000 times writing. The 11cm long shaft also makes it easier to operate. Crystal, a sincere present from Acase.



XtremeMac.com



03 WIRED SPEAKERS

DOCK CONNECTOR-BASED AUDIO SYSTEMS

Although wireless speakers are growing in popularity, most iPhone and iPod speakers rely upon front- or top-mounted docks to pull audio from Apple's devices. This docking design debuted in Altec Lansing's ever-evolving inMotion speakers, and carried on to Bose's SoundDock, which has remained all but unchanged for years - the SoundDock Series II from 2008 is shown above. Every docking speaker also recharges the connected iPhone or iPod, and a handful serve as computer sync stations or TV-ready video docks, too. Today's docking speakers generally work with all iPhones, and all iPods except the iPod shuffle. We've reviewed hundreds of different models in our earlier Buyers' Guides.

More common in past years than the present day, some wired speakers rely upon the iPod or iPhone headphone port to supply audio, a trick often used by pocket-sized speakers to reduce costs and save space. This generally adds an inconvenience: volume levels need to be managed both on the speakers and the iPod/iPhone, sometimes resetting every time you reconnect.

Wired iPhone and iPod audio systems range from tiny and portable to tabletop or even gargantuan freestanding blocks and towers. A wired system is currently \$50 to \$100 less expensive than a wireless version with comparable speakers inside.



Most speakers sell for \$50 to \$600. Listen in a store first, then make your purchase online.



JBL OnBeat

Compatible with even the iPad but far better suited to iPhones and iPods, this unique-looking unit has a manual rotating dock and two JBL-tuned speakers inside, sounding quite nice for the asking price.

\$150



Paul Frank Julius Dance Machine

Designed solely for iPods, this fun little audio system has a rechargeable battery inside, and ear-shaped volume buttons. It's cute for kids who already love Julius the Monkey.

\$100



Altec Lansing Octiv 650

Packing a down-firing 4" subwoofer and twin 3" front-firing speakers, this unit's pricier but more powerful than OnBeat and iA63, capable of louder and deeper sound. The wedge-shaped design is amongst the most neutral we've seen in the past year when viewed from the front, and the back has composite video outputs - a rarity these days.

\$200



iHome iA63

Beautifully designed for its price and distinctive by iPod and iPhone speaker standards, iA63 features a motorized rotating dock, side-firing speakers, and built-in alarm clock functionality - plus compatibility with the iOS iHome + Sleep and iHome + Radio apps. While you'll sacrifice on sound quality relative to more expensive options, the overall package is great for the price.

\$100

Monster Beatbox

As the only standalone Beats by Dre speaker system, Beatbox is a four-driver unit that sonically fits between \$300 audio systems we've reviewed and Bowers & Wilkins' \$600 Zeppelins; strong treble and midrange performance are impressive, but the bass is restrained. It's handsomely designed, with powerful volume.

\$450

03 WIRED SPEAKERS, CONTINUED
PORTABLE + DESKTOP OPTIONS



Eton Soultra XL
Bigger and more powerful than the original Soultra, this solar-powered, armstrap-carried boom box features a five-hour rechargeable battery and a flip-up solar panel that can be used to refuel it when left exposed to direct sunlight for hours; a wall adapter's included for charging on dreary days. Featuring eight speaker drivers, four active and four passive, Soultra XL keeps your iPod or iPhone in a sun-shielded central chamber.

\$250



iHome iP3
More affordable than iHome's flagship iP1, this smaller, curved-face system similarly includes Bongiovi Acoustics-tuned speakers and the signature clear acrylic front edging. Designed to appeal to women with a softer and more neutral design, iP3 puts out nicely balanced sound straight out of the box, performing well at higher volume levels, and like Altec's Octiv 650 features composite video-out ports on its back for connecting your iPod or iPhone to a HDTV. Additional nice touches include swirled metal buttons and a very useful remote.

\$200



XtremeMac 3-in-1 Microdock
Designed for travelers, this ultra-portable system houses two small speakers and a dock capable of charging either iPhones or iPods; XtremeMac includes both a carrying case and a wall adapter. Paired with a free alarm clock app, it's a solid and easy budget wakeup solution.

\$60



iHome iA17
Noteworthy because of its LED color-shifting half-globe base, iA17 is a fun basic clock radio speaker for kids, with fine sound and full compatibility with iHome's alarm and radio apps. A neat decor piece, for sure.

\$100



Altec Lansing iMT630
As one of the most compact real audio systems for iPhones and iPods, iMT630's seven-hour rechargeable battery, remote control, and larger 2" stereo drivers all boost its performance considerably above a system such as the 3-in-1 Microdock, though its sonic range is limited compared with Logitech's larger, eight-speaker S715 and Wireless Boombox.

\$150



Geneva Lab Geneva Sound Model M
Deluxe from the inside out, sonically powerful, and surely expensive by iPod and iPhone speaker standards, Model M offers a really nice compromise between the high design of Geneva's much bigger/pricier systems and the sonic performance audiophiles would expect from a unit competing with B&W's Zeppelins. Expect resonant, big sound and FM radio tuning from the wooden cabinet; the walnut version here sells at a \$50 premium.

\$650



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04 WIRELESS SPEAKERS

AIRPLAY + BLUETOOTH AUDIO SYSTEMS

When Apple introduced the first iPod back in 2001, the only way to broadcast music wirelessly was FM transmission - scratchy, staticy, and low-fidelity. Next came Bluetooth streaming, which sounded better but not perfect, and worked with most iPhones, iPod touches, and iPads. Now there's AirPlay, which streams pristine audio from iOS 4.2 or later devices to a new generation of wireless speaker systems. An AirPlay system can perform audio identically to the original source material, assuming that the speakers and amplifier are up to the task.

As of today, Bluetooth speakers continue to enjoy considerable advantages over their competitors. Bluetooth speakers are more common than AirPlay versions, and come in a much wider variety of shapes and prices. Some can be had for as little as \$50, while few are sold for \$300 or more. Bluetooth speakers may double as speakerphones when used with iPhones, and many run on rechargeable batteries. They are also quicker to start and change tracks than AirPlay models.

AirPlay speakers are rarer, but big developers are working on new units - albeit at higher prices. The least expensive AirPlay unit sells for \$230, as AirPlay adds a \$50-\$100 premium to a standard speaker. But it can stream from iTunes-equipped computers, and to multiple speakers at once. Some AirPlay speakers have docks and other frills built-in, too. Sadly, many are prone to signal drops.



For now, Bluetooth speakers offer top bang for the buck. AirPlay may improve next year.



Altec Lansing InMotion Air

Using one of the most powerful Bluetooth chipsets we've tested, this slanted-looking unit works with iPhones and iPod touches from up to 100 feet away, performing louder and with greater sonic range than the same-priced but smaller Jambox. A rechargeable battery, wall adapter, remote, and PC/Mac dongle are included.

-\$200

Aliph Jawbone Jambox

Expensive given its tiny size, this speaker is noteworthy for its ease of use: paired via Bluetooth, its top volume buttons are found alongside a Voice Control button for recent iPhones and iPod touches, while its side power switch evokes voice prompts for battery status. Puts out more sound than most small speakers, and works capably as a speakerphone.



-\$200



iHome iA100

Our Best Accessory of 2010 doubles as a sophisticated docking alarm clock and a Bluetooth wireless speaker system. Solid sound quality, a wide variety of app-aided features, a radio and remote make it a top option.

-\$200



Logitech Wireless Boombox

As the best overall wireless speaker we've yet tested, this unit uses the body and eight speakers of Logitech's prior S715i docking system for iPods and iPhones, replacing the dock with Bluetooth streaming. The audio quality is nearly identical between the wireless and wired units, and between the six-hour battery and wall charger, Wireless Boombox is awesome as a portable unit or as a full desktop speaker. A great value.

-\$150



Soundfreaq Sound Platform

This taller alternative to Sound Step Recharge has larger speakers and a nicer FM radio tuner, losing the battery and iPad dock support. An app can be used instead of a remote.

-\$200

04 **WIRELESS SPEAKERS, CONTINUED****MORE BLUETOOTH + AIRPLAY OPTIONS****XtremeMac Tango TRX**

With both Bluetooth wireless streaming and an iPhone/iPod dock, this stylish black system packs five speakers: four behind a fabric grille, one for bass underneath. It's warmer but not as detailed as the Soundfreaq systems; a nice option for low and medium volumes.

• \$180

**iHome iDM15**

Bundled with a hard plastic carrying box, these rechargeable battery-powered stereo Bluetooth speakers are connected to each other with a wire for full, clean, and widely separated stereo. A mic lets it work as a reasonable iPhone speakerphone.

• \$100

**Soundfreaq Sound Step Recharge**

As the less expensive but still very capable version of Sound Platform, Sound Step Recharge packs two 1.8" drivers and a uniquely rear-centered 2.5" subwoofer into a novel boxy enclosure. It relies upon Bluetooth for 60-foot streaming, but has a dock that works equally well with iPods, iPhones, and iPads, operating off a built-in battery for up to six hours. With an included wall adapter, it can recharge two iOS devices at once.

• \$160

Uniden BTS200

Highly novel relative to the other options here, BTS200 is positioned as a Bluetooth speakerphone first and foremost, and handles incoming and outgoing calls very well. It also has two neat differences versus more common monaural speakerphones: stereo speakers for music streaming, plus a detachable rechargeable battery pack. Thanks to a USB port on the battery's outer edge, you can actually charge an iPhone nearly two full times or simultaneously power an iPhone and BTS200 for hours. It's a great pick for travelers, and very good for desktop use.



• \$120

**Bowers & Wilkins Zeppelin Air**

Only one AirPlay speaker thus far is worthy of a high asking price, and that's this sequel to the same-priced Zeppelin. Re-engineered to pack full Wi-Fi capabilities into a very similar - and equally distinctive - oblong spheroid enclosure, Zeppelin Air sounds much the same as its audiophile-grade premium predecessor, but now works wirelessly with iTunes-equipped PCs and Macs, as well as iOS devices; the dock is iPod/iPhone-only.

• \$600

iHome iW1

Also elegant but more neutral and versatile than Zeppelin Air, iW1 mimics the classy aesthetic combination of a wraparound fabric speaker grille with glossy black plastic and chrome accents - one of the nicest iHome designs yet. And it packs a rechargeable battery, which you fuel with a specially designed charging station that sits on any flat surface; all you need to do is pick up iW1 by its rear handle, use it for up to 10 hours around your house, then put it back on the dock when you're done. The convenience factor of the unit and the charger are great, and there isn't another AirPlay system quite like it. Sonically, however, it's a step below the Logitech Wireless Boombox, so you'll have to decide whether the price premium is worthwhile; if you need iTunes streaming or want great styling, surely consider it.



• \$300

**Pioneer Elite Music Tap X-SMC4-K**

While it's the most complex of the AirPlay speakers by a mile, Elite Music Tap offers more features than any rival, including Bluetooth, FM/Internet radio, USB, music server, and docking options, plus four speakers, a 2.5" color screen for menus, and a red clock. A \$399 version leaves out Bluetooth.

• \$479

**Philips Fidelio SoundAvia AD7000W**

The most affordable AirPlay speaker is also the most sonically limited, packed with only two speaker drivers relative to iW1's/Music Tap's 4 and Zeppelin Air's 5. But both the sound quality and neutral design mimic Bose's \$300 SoundDock, minus the dock and plus an aluminum top. A solid value.

• \$230



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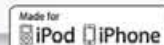


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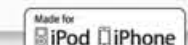
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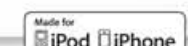
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05 APPLE TV

VIDEOS, PHOTOS, MUSIC AND MORE ON YOUR TV

One year ago, the \$99 second-generation Apple TV was merely a good standalone device - a way to let any HDTV display rented iTunes movies and TV shows, or streamed content from a computer running iTunes. The black plastic box was smaller, cooler-running, and easier to use than its "hobby" predecessor, shipped with a neat silver aluminum Infrared remote, plus the option to use iOS devices as Wi-Fi remote controls. As Netflix bulked up the streaming videos it optionally offered for an \$8-\$9 monthly subscription, Apple TV began to look mainstream.

It's only become better since then: the iPad 2 and iPhone 4S can now wirelessly mirror everything on their screens through the Apple TV, and all other iOS 5 devices can stream videos, music, and photos directly to it, as well. Developers are starting to leverage Apple TV for high-resolution, big screen iOS games. Only Apple's Digital AV Adapter offers a viable wired and less expensive alternative.

And it's still a very good device when used alone. In mid-2011, Apple enabled it to purchase movies and TV shows from the iTunes Store, and in some countries to freely stream all of the shows you previously purchased. There are only a few remaining issues. It doesn't allow users to store content, which means that it's dependent on a Wi-Fi network to do almost everything - preferably 802.11n, but with b/g support - even when you travel. And you need to self-supply a HDMI cable to connect it to your TV. But these are now minor gripes. The Apple TV has become an all but mandatory accessory for iPod touch, iPhone, and iPad users; our guess is that it will only continue to grow in value and importance over time.



Apple TVs make great sub-\$100 holiday gifts; many users now have more than one.



Packaging + Pack-Ins

Apple TV, a power cable, remote, Apple stickers and manuals are all you'll find in the box. You self-supply video/audio cables for ~\$20 each; Apple now sells a combined video and audio HDMI cable for \$19. An optical audio output is optional for AV receivers and 5.1 speakers, but there's component video or analog audio connector.



How Apple TV 4.4 Works

Currently, Apple TV's interface is divided into five text headings with additional text choices below, and pieces of cover art floating on top. The interface is designed to be used with simple up/down/left/right/select buttons, and starts your blue selector box on the text headings. Think of it this way: the top of the screen is for recently accessed or Apple-promoted content, the middle is for different content sources, and the bottom is for digging deeper into each source and settings. Used alone, Apple TV can access all of your iTunes content on computers that are currently active on your Wi-Fi network, as well as streaming Internet content, and iTunes Store videos. If you have an iOS device, you can use it to control Apple TV, or interrupt it with iOS-streamed media.

Video playback starts quickly over good networks and broadband connections, and streaming from Apple or video partners such as Netflix and Vimeo is more often plagued by your Internet provider's issues than the device's. Apple TV is fast, powerful, and easy to use.



AirPlay As Killer App

Apple TV's ability to stream iOS videos, music, photos, and games is amazing. Only two button presses on the iOS device are generally needed to start AirPlay once it's been set up. Anyone can use it, and everything looks and sounds better on the TV.



The 720p Video Cap

The second-generation Apple TV is capped at a semi-HD output resolution of 1280x720. Rumors suggest a full HD (1080p) version is on the way; we'd expect it at around the same time as Apple debuts 1080p videos for sale in the iTunes Store.



Digging Deeper

Three of Apple TV's five menu choices have changed a lot since 2010. Movies and TV Shows now sell videos from the iTunes Store rather than renting them; Internet now includes hockey, baseball, and basketball subscription services, as well as free Vimeo and WSJ videos, iCloud Photo Stream photo sharing, and more.

Movies. Buy films or watch movie trailers.

TV Shows. Yesterday's and classic episodes.

Internet. Netflix. MLB. NBA. NHL. Photos.

Computers + Settings. Stream iTunes + more.



Movies played on the Apple TV are either roughly DVD quality or 720p - a visible step below Blu-Ray Discs. Apple's interface is faster than a DVD or Blu-Ray player's, though, letting you skip instantly around in your videos, and get info before purchases.

Virtually every major network and cable TV show is available on iTunes the day after it originally airs, for a price of \$2 (DVD quality) or \$3 (720p). The search feature showed here forces you to do a lot of hunting and pecking on Apple TV's remote.

You can stream videos from YouTube, Vimeo, Netflix, and three sports leagues using the Internet menu; this is also where photos from your computer, Flickr, a MobileMe account, or iCloud Photo Stream can be searched and played on your HDTV.

Videos, music, and photos from any iTunes 10+ library can be navigated using old iPod-like menus from within Apple TV; streaming is nearly instantaneous. You can also set HDTV settings, universal remote controls, and audio output here.

Limited Memory

Apple TV has only 8GB of storage space, which isn't user-accessible or even advertised by Apple. It's there as a temporary buffer so that videos don't stutter, and works quite well.

What You Need: A Wi-Fi Network and HDTV

Apple TV includes 802.11a/b/g/n Wi-Fi; you must connect it wirelessly (or with an Ethernet cable) to a router, and with an HDMI cable to a TV, or it won't work. Unlike the iPhone 4/4S and iPod touch, Apple TV is compatible with both 2.4GHz and 5GHz 802.11n networks, including ones set up by Apple's latest AirPort and Time Machine routers. It also works with non-Apple routers.



Apple's Free Remote App

Free in the App Store, Remote looks much like the Music apps on iPads, iPhones, and iPods, letting you control whatever's streaming to the Apple TV, or playing on a computer with iTunes. Remote also offers swipe- and tap-based navigation of Apple TV menus.



Simplism HDMI Switcher 4x2

Simplism's HDMI switches let you connect and control four devices with one TV (4x1/\$169) or one TV and one receiver (4x2/\$298). Less deluxe MonoPrice versions sell for \$29-\$57.

\$169

Apple + MonoPrice Cables for Apple TV

Virtually any \$2 HDMI-to-HDMI or optical audio cable from MonoPrice.com will work with the Apple TV. The HDMI cable handles both HD video and multi-channel audio; the optical one is optional and pumps multi-channel audio to a stereo receiver. The official Apple HDMI to HDMI Cable (shown, above) is \$19 and nearly six feet long; it looks nice with the Apple TV but doesn't provide any special functionality relative to the far less expensive MonoPrice options.



\$2+

The Future of Apple TV: Higher-Resolution Videos, Bluetooth Support?

Given the success of the iOS App Store, users have called on Apple to release Apple TV-specific apps, but thus far, Apple has declined, instead empowering iOS apps to stream their content to Apple TVs over AirPlay. While a dedicated Apple TV App Store is possible, rumors have suggested that Apple is focusing on improving the video output, and possibly adding support for Bluetooth keyboards and controllers. Will Apple TV become a game console?



06 IPHONE EXTENDERS

DESKTOP PHONES + SPEAKERPHONES

While most of the speakerphone accessories in stores are speakers first with microphones second - or afterthoughts - there are a handful of options that were specifically optimized to help you do more with the iPhone's telephone features.

Most take the form of traditional handsets, either using a cord tethered to a docking station, or going completely wireless from iPhone to handset using a pure Bluetooth connection. These accessories bridge the look, feel, and functional gap between Apple's flat glass slabs and the feature sets of traditional home and office telephones, offering the comfort of a taller handset with the conveniences of a cellular connection.

Less common but equally useful are solutions such as Cobra's PhoneLynx, which uses Bluetooth to pair with one or two iPhones, then distributes their incoming and outgoing calls to the home or office phone(s) you already own. This way, you can continue to use your existing collection of wireless phones while cutting off your land line - a major convenience.



Leveraging your existing landline phones with PhoneLynx can save you a ton of money.



Native Union **Moshi Moshi MM03i**

With only one cable to worry about - an included wall adapter - this unique Bluetooth handset and iPhone dock combines beautiful modern styling with traditional phone comfort. The dock charges the wireless handset so that you can make calls without a cord; you can connect it to a computer for iPhone syncing, too.

\$150

Altigen **iFusion AP300**

If you prefer the styling of an office telephone or want a true speakerphone, iFusion goes beyond MM03i. With superior mic quality to the iPhone 4, and an integrated speaker that handles phone calls and streaming music, iFusion also serves as a charging station for an uncased iPhone. Dialing is handled on the iPhone's screen.



\$180



Invoxia **NVX 610**

Designed for businesses that rely heavily upon Skype or SIP services, this office desktop phone unusually relies upon iOS devices as keypad and contact manager to make VoIP calls. Like the iPhone 4/4S, the beautiful NVX 610 is made from a combination of glass and steel, with unique speakerphone and handset designs. You connect NVX 610 to an office network using an Ethernet cable, and optionally to a computer so that your iOS device can charge and sync from the built-in dock at the same time. Bluetooth is included for iPhone cell calls, but oddly secondary to the unit's VoIP functionality. Read our full review for important caveats about its performance, which we hope will be fixed with firmware and app updates.

\$499



Cobra **PhoneLynx BT 215**

One of our favorite iPhone accessories is this inexpensive bridge between cellular and landline phones: PhoneLynx pairs with one or two iPhones, routing their incoming and outgoing calls through your old home phones. You hear your old phones ring, get a regular dialtone when calling out, and can even turn one iPhone into the heart of a multi-phone wireless system. It even automatically switches between iPhones.

\$60



07 VEHICLE ACCESSORIES

CAR/BIKE CHARGING + MOUNTING GEAR

Four years ago, connecting an iPod or iPhone to your car stereo meant investing in low-tech FM transmitters or cassette tape adapters, or splurging on an expensive aftermarket car kit. Today, new car stereos routinely include auxiliary ("aux") inputs, USB ports, or Bluetooth streaming features that support Apple's devices. So you might not need any in-car accessories at all, but if your car is lacking something, read on. (Options for older cars are in our past Buyers' Guides.)

Cars never include device mounts. A mount lets you see the iPod or iPhone's screen for map/GPS applications, and helps when changing songs. Windshield, dashboard, and air vent mounts start at \$20 and climb up to \$100, depending on factors such as how custom-fit they are to a particular car, and whether other frills are built in. We've generally preferred car-specific mounts from ProClip, but they're expensive. And if you need a bike mount, a good solution is now available.

If your car doesn't include a USB port, single- and double-device chargers start at \$20, with combination charging, audio, and mounting solutions starting at \$50.

*** If your iPod/iPhone has Voice Control or Siri, and you don't need map apps, skip the mount.**



Kensington PowerBolt Micro
As one of the most basic car chargers currently offered with iPod, iPhone, and iPad full-speed power support, PowerBolt barely sticks out of your car's lighter port, and includes a dock cable.

\$25



Scosche reVive II
Available now in multiple versions, reVive II features two USB ports that charge two iPhones, an iPod and iPhone, or even an iPad and an iPhone. Make sure you look for the newest version if you want iPad support.

\$40



Griffin PowerJolt Plus
Unique in the car charger market because of one feature - a passthrough port on its charging bulb so that you can connect another charging accessory through it - PowerJolt Plus offers iPod, iPhone, and iPad full-speed charging capabilities, and comes with a coiled Dock Connector cable so that you can keep your device anywhere in your car.



\$30



Luxa2 H10 Bike Mount for iPhone 3GS/4/4S
The best bike mount we've seen thus far for iPhones is H10, a hard plastic frame with a soft rubber liner and a secure clamp for attachment to handlebars. H10's most interesting feature is its ability to accommodate four different iPhone models - the 3G, 3GS, 4, and 4S - using soft resizing skins. You can also detach the oversized top and use it temporarily as a case with a belt clip.

\$49

Griffin TuneFlex Aux Handsfree
There have been many similar combination mount, charging, and audio accessories to this one in the past, and we've liked quite a few in prior Buyers' Guides. What TuneFlex Aux Handsfree adds is a cable for iPhone speakerphone support, complete with a microphone that may help to improve the intelligibility of your voice.

\$50



08 CAR WIRELESS

BLUETOOTH GEAR + FM TRANSMITTERS

If you have a new car and a recent iPod or iPhone, you mightn't need anything to enjoy music or calls on the road. Other users will want one of these new wireless accessories: they allow iPhone or iPod audio to be heard in older cars.

Phone calls can be handled by visor-mounted speakerphones. These Bluetooth accessories combine one speaker, one or two microphones, and a rechargeable battery; they can stream calls, and some can stream music, albeit at low fidelity.

Music is handled better by two other options. First, FM transmitters beam music from almost any iPod or iPhone to a car FM radio; they work in all cars, but sound quality is so-so. Second, Bluetooth car kits communicate wirelessly with iPhones or iPod touches, sending music through a wire to the car's speakers. Some Bluetooth kits include phone mics, too. While these kits require iOS devices, and cars that have aux-in ports, they sound better than FM transmitters, and free your device to be anywhere in the car. If you don't need that freedom, wired car kits - or in some cars, just a Dock Connector to USB cable - will produce superior sound.



Apart from visor speakerphones, iPhones and iPods often sound better with wired add-ons.



Scosche freqOut

FM transmitters were all the rage five years ago, but good models are uncommon today. This is an exception: capable of powerfully broadcasting to your chosen FM radio station or an aux-in port, with its own tuning screen and an iPhone/iPod car charger built in. It does everything well, and has a free, optional iOS app.

\$60

Belkin AirCast Auto

Taking a different approach than freqOut, AirCast Auto uses Bluetooth wireless to stream iPhone calls and/or music from any iOS device to a car's aux-in port. You mount an oversized

microphone and call start/end button with adhesive on your dashboard, connect the charger, and optionally connect your own iPhone/iPod charging cable to it.



\$80



BlueAnt S4

An unusually powerful visor speakerphone, S4 is capable of being operated fully by voice commands, playing iPhone music, and running in low power mode for 20-700 hours between charges. Sleek and impressive.

\$100



SuperTooth SuperTooth HD

The current visor-mounted speakerphone champion has Bluetooth 3.0 support, a rechargeable battery with 20 to 1,000 hours of run time, and the strongest sound quality we've heard from a device like this. Novel is an optional, subscription-based Siri-like speech to text service for all iPhones, turning your voice into SMS, email, Twitter or Facebook posts; it can read new messages to you, too. Even without this feature, it's a very powerful pick.

\$129



Bluetrek Speaky

As a fun dashboard-mounted speakerphone option with adhesive pads, Speaky uses Bluetooth 3.0 to stream calls and music for six hours. It offers surprising quality for a cute speaker designed to appeal to women.

\$70

in-vehicle mounting solutions

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iLounge Best of 2005 Awards : "Best iPod Car Accessory of 2005..."

iLounge.com: 2011 Buyers' Guide : "Still the best iPod/iPhone car holder..."

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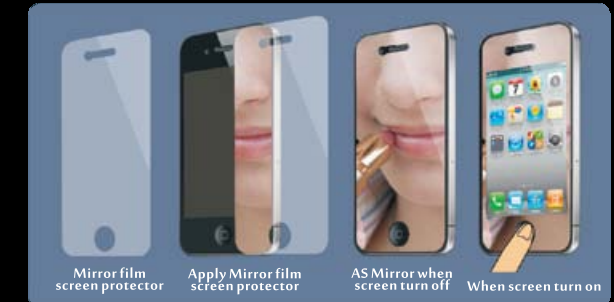


Beyond Protection™



Sleek-Pro

Sleek-Pro magical coloring mirror film screen Protector & cases as Beauty-Mate for iPhone.



Key features:

- Anti-Scratch 3H, Anti-Fingerprint
- As mirror effect when screen turn off
- 99% Radio Wave Transmission
- Magical coloring effect from different angle & distance
- Turn on Screen with Transmittance 80%
- Lower haze (1%) and less rainbow effect
- Self gel with bubble free fitting
- Washable and Reusable
- Maintaining touch sensitivity

Typical AEE Material: HC-RTB-200S-T

Touchscreen protection technology for iPhone and iPad takes a giant leap forward thanks to AEE Precision Coating Technologies

Pro-Mat, which is part of American firm AEE Technology LLC of Boston USA, has introduced a new, technologically-advanced mirror film coating that is both decorative, and protective of touchscreens on smartphone and tablet devices. The 'Sleek-Pro™' product series is made from this new film, and is designed with both aesthetic and technical qualities in mind. With 'Sleek-Pro™' consumers can choose between three 'Magic Coloring' mirror film protectors, each of which changes hue depending on the distance and angle from which it is viewed. When the iPhone or iPad is switched off, the screen acts as a mirror-fun, and useful for checking make-up and other things. Yet when the iPhone is turned on, the coating has brilliant optical properties, displaying the screen perfectly. And with the 'Sleek-Pro™', there is no loss of touchscreen sensitivity. It is scratchproof and also prevents smudges and fingerprints. What's more, while many inferior products and previous generations of mirror film protectors inhibited electromagnetic waves, leading to up to a 40-decibel loss of sound the 'Sleek-Pro™' lets 99% of the radio waves through.

It's all thanks to the company's new nano multilayering technology with optically engineered PET film coating, which provides anti-scratch, anti-fingerprint protection and self-gel application. When the screen is on it lets light through from the backlight of the device, when the screen is off it reflects the front light, giving the mirror effect. Unlike previous mirrored screen protectors, where metallization problems affected performance, the 'Sleek-Pro™' does not lose its mirroring effect.

Pro-Mat also makes cases for iPhone protection using 'Magic Coat™' technology, which have rigid decorative finishes that do not inhibit radio waves under any conditions. This is another example of form following function, proving the company's slogan: 'Beyond Protection'.

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09 WIRED HEADPHONES

WITH OR WITHOUT APPLE REMOTES + MICS

Before iPods had built-in speakers, little white earbuds were the most popular way for Apple fans to listen to their music. These days, between the speakers in iPhones, iPod touches, and docks, headphones seem almost secondary. But if you really want to hear subtle details in your favorite songs, a great pair of headphones is a smart investment. They use between one and eight little speakers per ear to replicate - or accentuate - each song's highs, mids, and lows.

There are now thousands of headphones, though most are just small variations on the same few ideas. Some have integrated remote controls and microphones, others don't. Apple's free single-speaker Earphones are called "earbuds," and hang precariously outside your ear canals. Its beautiful \$79 In-Ear Headphones with Remote and Mic, above left, have two speakers with anemic bass. Well-designed but overpriced are Monster's now-famous Beats Studio headphones, which use large single-speaker earcups that surround your ears and block out ambient noise. Most earphones range from \$30 to \$300, we would generally avoid sub-\$50 models and focus on models with A or A- reviews on iLounge.com.

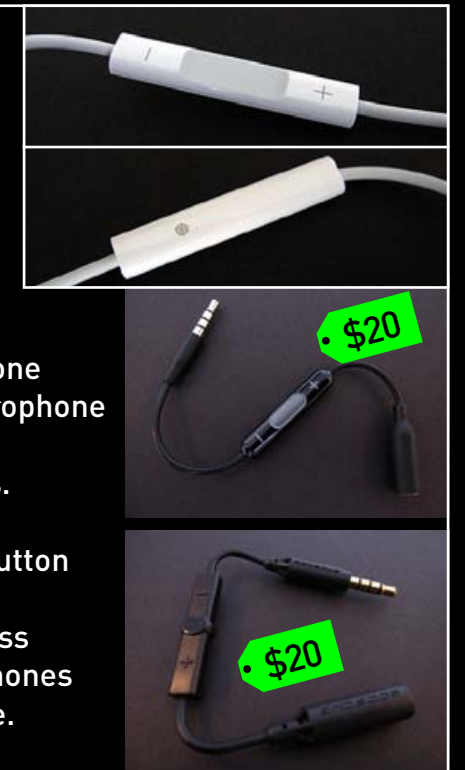


Our top picks are worth a splurge. You'll love top \$150 models, and be blown away at \$500.

Apple's Three-Button Remotes + Microphones

Several years ago, Apple introduced new earphones with in-line three-button remote controls and microphones, and offered the internal components - not the casings shown at right - to third-party developers. Most of the headphones and earphones now sold specifically for Apple's devices use the Apple parts, which means that their microphones sound almost identical to one another, and that their remotes are located in the same position: at neck level, dangling from one headphone cable. This is a less than ideal location, as the microphone is best situated higher, and the remote lower. Apple's remotes typically add a \$20 premium to the cost of regular headphones.

The top and bottom buttons are for volume, while the center button pauses, plays, and changes tracks; on recent iPhones, it also answers and ends phone calls. Scosche and Belkin sell mic-less remote adapters for \$20, and Scosche's TapLine-ready headphones have separated mics and remotes for even better performance.



What Do These Graphics Mean? →

Earphones are built with one to eight miniature speakers per ear, with the vast majority containing only one or two. When properly tuned, extra speakers - also called "drivers" - divide the work normally handled by one speaker. This adds to the complexity and the cost of the earphone.

The goal is to make the speakers work together to reproduce sound as accurately as possible, or alternately, to emphasize some parts of the spectrum. Virtually all headphones perform the midrange, where most musical instruments and voices sit, represented by the central line on this meter. Depending on how they're designed, the little speakers may also perform some highs/treble (think cymbals) and lows/bass (think low thumping beats). The best ones offer detail across the spectrum, which we represent with up to three waves per side; others lack range or detail. Four, six, and eight-driver designs pair up two speakers for lows, mids, and/or highs, enabling extra detail or power in that range.



H2O Audio Flex

Inexpensive yet good sonically, this is H2O's lowest-cost waterproof model - a very good pick if you want to swim, surf, or just sweat with your iPod or iPhone in a water-safe case (sold separately). There's no remote or mic, features found on H2O's superior-sounding Surge Contact, but the price here is very aggressive.

\$30



Incase Capsule

Sold in four color schemes, Capsule is the first canalphone from a company best known for sharp-looking cases, and it's a very good pick for its low price: a neat 3-button remote and mic are found at neck level, and the bass-focused, rubber-tipped buds sound good. A stylish nylon carrying bag is also included.

\$50



**Audio-Technica
ATH-CK400i**
Inexpensive for a set of earbuds with a mic and three-button remote, these come in different colors and have the crisp sound we expect from this respected Japanese audio brand, minus the low thumpy bass.

• \$60



**Altec Lansing
Bliss Platinum**
Sold in three colors, these fabric-cabled canalphones come with silicone tips that are designed to fit girls' smaller ear canals, using neat metal housings and jewel-like caps for the warm-sounding earphones.

• \$70



JAYS a-JAYS 4
Built with great flat cables and an in-line remote and mic unit, these stylish black and gunmetal ear buds fit in the smallest ear canals, and offer pleasantly warm-skewed sound. Cheaper a-Jays lack the remote + mic.

• \$70



**Audio-Technica
ATH-ANC23**
These silicone-tipped earbuds deliver clear, balanced sound that rivals peer-priced options sold without its battery-powered active noise-cancelling hardware, a standout feature for the price.

• \$100



**Fanny Wang
On Ear Wangs**
Inspired by the style of Monster's famous Beats line, On Ear Wangs sound better than the \$230 Solo HD, the comparable Monster model, and come in white, black, red, or pink versions. A soft carrying bag and an audio port splitter are bundled.

• \$170



Bowers & Wilkins C5
One of the very best canalphones we've ever tested, C5's warm sound is enhanced by truly brilliant tubes and cables that fit securely inside ears, using soft loops to lock into place. Beautiful, classy, and remote/mic-laden.

• \$180



Monster iSport Immersion
Overly expensive but nicely designed, iSport redefines the high price point of waterproof earphones, partially justifying it with the first ever waterproof 3-button remote and mic, plus special earhooks to secure the canalphones.

• \$180



Scosche Realm RH1056m/md
As a challenger to Monster's Beats Studio, Realm is sonically nearly identical for \$120 less, and comes with sharp-looking flat cabling, optimized separate mic and 3-button remote units, and a nice hard carrying case.

• \$230



**V-Moda
Crossfade M80**
The smaller on-ear version of last year's Crossfade LP has better sound - nice bass plus more treble and midrange detail - and nearly identical cool styling. A 3-button remote and decent mic are included.

• \$230



Scosche Realm IEM856m/md
Instantly likable due to a warm skew, this new double-driver canalphone offers the looks of Monster's in-ear Beats Tour with superior sonic detail, a 3-button remote, and mic, though at a higher price.

• \$250



Bowers & Wilkins P5
Comfy and gorgeous, P5's sheep's leather earpads beautify and soften the sleek metal hardware. The sonics are a little too warm, but you'll be stunned by the look and feel; includes a 3-button remote + microphone.

• \$300



Monster Beats Studio
Beautiful but pricey, Monster's signature earphones have active noise cancellation, a mic, and a one-button remote as bonuses. We also really liked the dynamic sound - bassy but with nice treble, too.

• \$350



Phonak PFE 232
The price is high for twin-driver earphones given that great models start at a third the price, but PFE 232 continues Phonak's tradition of delivering impressively crisp sound; included filters let you tweak the sonics to taste. A three-button remote and mic are on one of two included cables.



• \$599



JH Audio JH16 Pro
Now the best "price is no object" canalphone, the JH16 Pro adds four extra bass drivers to the same technology found in the more expensive UE18 Pro, literally placing 8 miniature speakers inside each of your ears - 16 total. We heard so much detail in songs that we started to lose track of time when listening to these, and we mean it. Note that you need to visit an audiologist to have JH16 Pro custom-fit to your ears, a step that costs around \$35 and requires two weeks or so. A gift for the person who has it all.



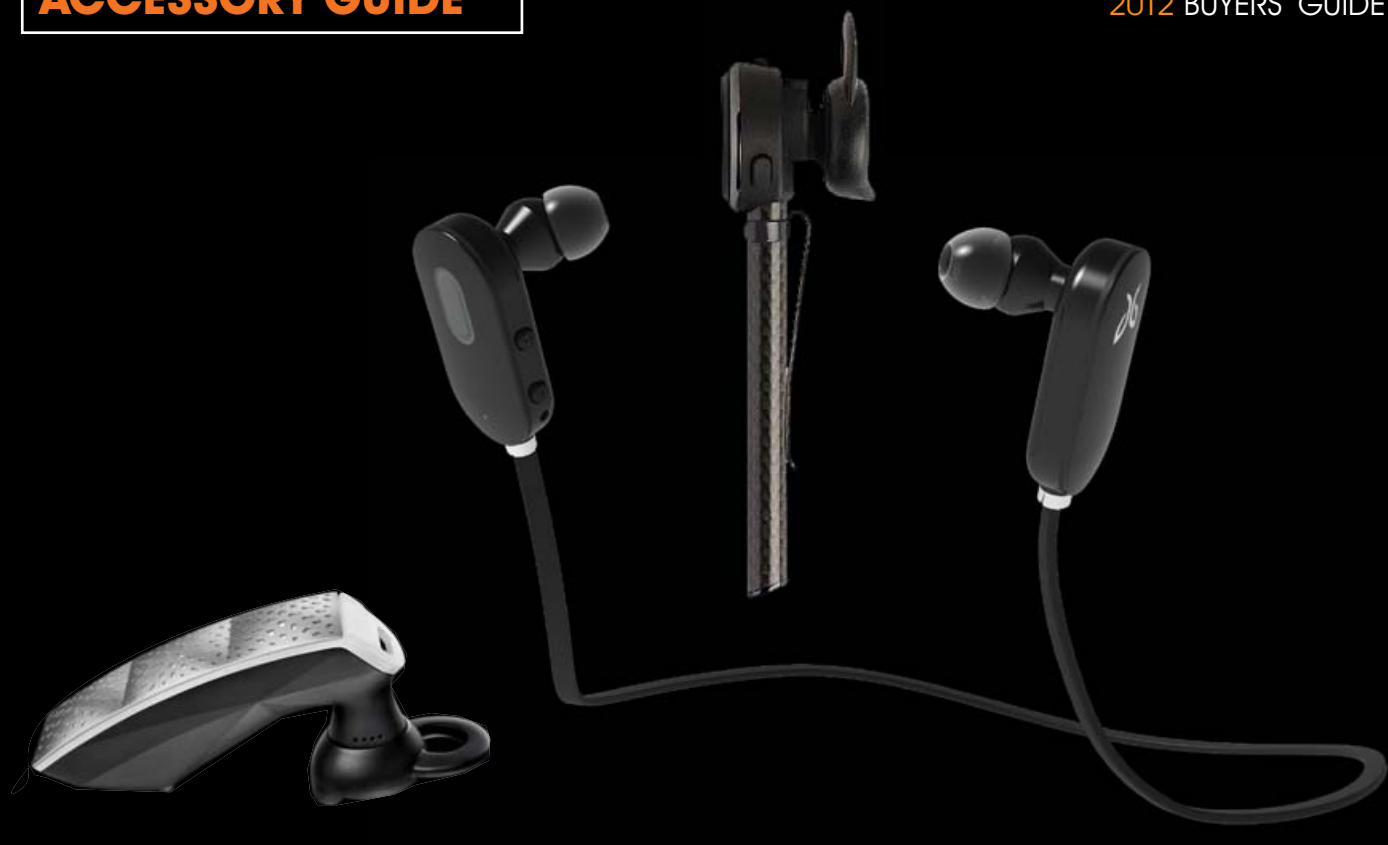
• \$1149



Ultimate Ears UE 18 Pro
With 6 drivers per ear, UE 18 Pro offers sonic accuracy with controlled warmth, falling only a little short of JH16 Pro in bass detail. Ultimate Ears offers superior frills and color options for the higher price.



• \$1350



10 WIRELESS HEADSETS

BLUETOOTH HEADPHONES + EARPIECES

Wireless headphones have been around for a long time, but very few companies have figured out how to make them small, light, and cool enough for mainstream customers. Recent Bluetooth models are changing that. iPhone users now have their choice of several tiny, sharp-looking monaural earpieces for phone calling and light music streaming. iPod touch and iPhone users can stream music to very wearable stereo headsets, which often have remote controls and mics built in.

The rub with the latest headphones and earpieces is generally the same as with their predecessors: they have limited battery life, sound quality equivalent to wired headphones half their price, and styling that's good rather than great. But as compared with versions from five or ten years ago, the best of the new models have very low static levels for listening to music and phone calls, plus superior microphones and intelligibility to let callers hear you. They're small enough to be tossed into any pocket, and in some cases are made from incredibly strong materials. Apple briefly flirted with and abandoned the category two years ago. We're hoping that it will return to the market with even smaller, better designs.

 **Expect to pay \$70 or more for top Bluetooth mono or stereo headsets, like those above.**



JayBird Gear JF3 Freedom
It's the closest thing to a breakthrough that Bluetooth stereo headsets have had in years - lightweight, sweat-proof earpieces joined by a simple flat cable that runs behind your neck. While the sonics aren't spectacular, this is the rare wireless headset that you can wear for sports without ear fatigue; a mic is built-in, too.

\$99

Aliph Jawbone Era
The latest Jawbone is one of the top monaural wireless earpieces around. Sold in four different visually neutral color and texture schemes, Era has the best ambient noise filtering we've heard in any Bluetooth headset, enabling you to be heard (and hear callers) even when you're in a noisy room. Bundled with wall and computer charging cables, multiple rubber eartips and an earhook stabilizer that we found necessary to keep it properly in our ears, it's on the very high end of the category price-wise, but sonically a great performer. Era streams music, too, and the 5.5-hour battery life is reasonable.

\$130



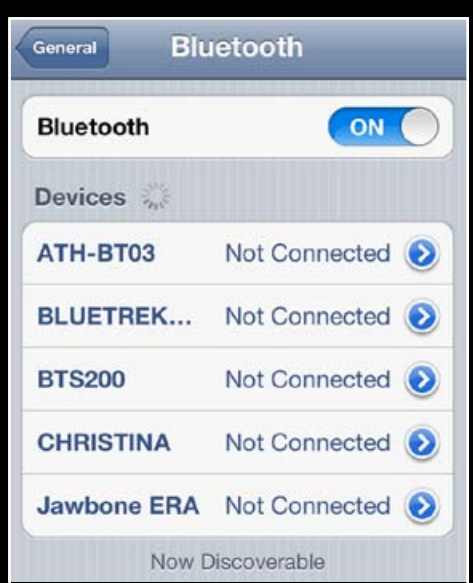
Bluetrek Carbon
Thanks to a carbon fiber tube and Bluetooth 3.0, this ultralight earpiece lets you be heard clearly in all but the noisiest environments, where Jawbone Era has an edge. A great value, with 4.5-hour battery life.

\$70



Audio-Technica ATH-BT03
Similar visually and sonically to the wired ATH-CK400i in the prior section - minus a little bass - this Bluetooth version lets you hide your iPhone/iPod away in favor of a shirt-clipped wireless and six-hour battery box.

\$80



Activating Bluetooth
Turn on Bluetooth in the iOS Settings app under General > Bluetooth. Each device has its own pairing instructions.



11 MICROPHONES

TINY, POCKET-READY, OR FULL-SIZED

Back in the earliest days of iPod accessories, microphone add-ons were all the rage. These days, microphones are built into so many iPods, iPhones, and headphones that standalone accessories are few and far between.

The simplest microphone accessories are small enough to put in pill-sized capsules, adding nothing more than basic recording capabilities to iPod nanos, iPod classics, and mic-less iPod touches. They connect to the iPods' headphone ports and generally deliver acceptable monaural recording quality; they're also very hard to find in stores these days. More sophisticated mics, such as Blue Microphones' Mikey, are capable of stereo recording with certain iPods and iPhones - sadly, no current-generation Apple devices, which has restricted their appeal and availability as well. So what's actually available to purchase these days? IK Multimedia's iRig Mic is optimized to offer superior monaural recordings when used with iPads, iPhones, and iPod touches; it works with a variety of different apps. Audio-Technica's beautiful USB microphones - and other USB mics - work only with iPads for now, making iRig Mic a real standout.



For voice recordings, the mic in Apple's \$29 Earphones is fine. If you're a pro, upgrade.



SwitchEasy ThumbTacks

Almost as small as their namesake, ThumbTacks are cute little microphones that give iPod nano and classic models the ability to record monaural voices; they have no speakers inside.

\$13



In-Line Microphones

Over 100 headphones and earphones (such as Ultimate Ears' \$60 **UE350vi**, shown) now have microphones built in; almost all the mics are sourced from Apple and sound nearly identical. See *Wired Headphones*, above.



Ozaki iPill

More obscure than ThumbTacks but certainly more conversation-provoking, iPill is a microphone for iPod nano and classic models that separates into mic and cap halves. Slightly larger than an actual pill and equally easy to lose, iPill is nonetheless a good option, producing louder and clearer recordings than ThumbTacks.



\$13



IK Multimedia iRig Mic

Built for compatibility with all iOS devices and accompanied by a free iOS effects application, iRig Mic is a unidirectional condenser-electret microphone with three gain settings and a pass-through port for earphone connections. It's the rare iOS mic designed to fit into a conventional microphone stand, and has the sort of build and sonic quality you'd expect from a nice add-on.

\$60

Blue Microphones Mikey

Limited to working only with certain iPod nano, classic, and older touch models, Blue's second-generation Mikey is amongst the very rare stereo mics released for iPods, with twin capsule microphones inside of a flexing, gain-adjustable housing. We'd expect an updated version with full iPhone and modern iPod compatibility soon.

\$80



12 UNIVERSAL REMOTES

DONGLES, ROCK PLATFORMS + TUBES

It's surprisingly easy to turn your iPhone or iPod touch into an Infrared remote controller for your TV, DVR, stereo system, and other home entertainment devices: accessories start at \$30 and climb to \$100 based on their sophistication.

The low-end Apptwee Ri (above) plugs into a headphone port, using a relatively weak IR beam and threadbare iOS app to emulate other remote controls. More powerful and expensive Dock Connector-based versions, including L5 Technology's L5 Remote, connect to the bottom of iPhones, iPod touches, and iPads, using better apps with greater customization and smoother multi-device interfaces. One issue: these dongles are easy to misplace and a pain to swap off.

If you're looking for the ultimate in thoughtful design, Gear4's UnityRemote and Griffin's Beacon go beyond their rivals. Each uses a battery-powered IR blaster that connects to iOS devices over Bluetooth, so there's no dongle to worry about. UnityRemote looks like a tube, and Beacon resembles a stone atop a platform. They both have well-developed apps that emulate multiple remotes.



There's no contest here: UnityRemote and Beacon are top picks, though you'll pay more.



L5 Technology L5 Remote

Though newer rivals have switched to standalone Infrared blasters that sit in the middle of a room, L5 Remote plugs right into an iPhone, iPod touch, or iPad and works with a free app to provide one of the more well-designed and affordable universal remotes we've tested. Just be sure not to lose the black add-on.

\$50

Griffin Beacon

Relying on a free Dijit app to provide TV/Netflix listings and remote functionality, Beacon sits in front of your home entertainment center and blasts IR commands signaled to it from your iOS device. You'll have to swap the batteries every two months, but the price is attractive given the quality of the software and the easy Bluetooth pairing it uses.



\$80



Logitech Harmony Link

Using Wi-Fi and wall power rather than Bluetooth and batteries, Harmony Link lets you control an entire home entertainment center with two included IR blasters, and can be hidden away. The free app's getting better.

\$100



Gear4 UnityRemote

Like Beacon, UnityRemote sits somewhere in front of your entertainment center, relying on aggressively power-managed Bluetooth for the same two weeks before swaps of its three AA batteries. While the solution's a little more expensive, UnityRemote has a nicely designed app to manage multiple devices and activities with minimal hassle, and the company has been very proactive with software updates.

\$100



Peel Peel Remote

Combining a fruit-shaped wireless IR blaster with a wall and router-powered Wi-Fi transmitter, Peel offers an app that's heavy on program guides and automation, but a little light on solutions when it can't do something.

\$100



13 CAMERA ADD-ONS

CAMERAS, LENSES, AND MOUNTS

Apple's iPhone 4 included the company's first truly great camera - a 5-Megapixel sensor with strong macro and autofocus capabilities, capable of at least partially replacing its owner's still and video cameras. But developers were already trying to sell iPhone - and iPod - camera accessories a year or two earlier. They fall into three main categories, and a handful are actually worth considering.

Several companies now sell iOS-compatible wireless cameras, such as Stem's iZon, enabling you to monitor your home or office for intruders using iOS apps.

A few companies have developed iPhone-ready wide-angle and zoom lenses that attach magnetically to specific models. They're gimmicky and hard to recommend.

Multiple iPhone and iPod touch camera mounting solutions have been released. Most consist of a case plus a tripod or equivalent stand. The cases are almost all problematic in some way, but the tripods are occasionally quite good, as with Joby's GorillaMobile (above). Expect more options because of the iPhone 4S.



Many so-so iOS home/baby monitoring video cameras will hit the market over the next year.



Digital King Wide & Macro Lens

We feature these magnetically-attached lenses more to warn against them than anything else; they're sold as expansions for iPhones but produce blurry, crummy shots.

\$45



Joby Gorillamobile

Known for its flexible tripods, Joby has a series of iPhone and iPod versions that let you mount your camera anywhere - even hanging from a pipe - by latching onto specially made iPhone and iPod cases.

\$40



Logitech Alert 750i

Far more sophisticated and expensive than its rivals, Alert 750i is primarily a PC-managed home monitoring solution that happens to have iOS viewing software. The HD cameras have wide lenses, motion tracking, and 2GB microSD cards for recording, but rely on huge wall adapters for both power and wireless streaming.

\$300

Avaak VueZone Gen 2

If you're looking for a home monitoring system with iOS compatibility, this is the best current pick, bundling two motion-sensing, magnet-mounted battery-powered cameras with a wireless router that can manage additional cameras if you want them. A free app lets you watch all of your VueZone cameras when you're away from home.



\$290



Stem Innovation iZon

Designed for raw simplicity, iZon includes one fully Wi-Fi camera and microphone inside a magnet-mounted tube housing, using wall power rather than batteries. In addition to motion sensing, it offers both audio and video recording, and can send clips straight to a private (or public) YouTube account for instant viewing when you're not at home. Additional cameras are \$130 each.

\$130



14 iOS COMPUTER GEAR

HARD DISKS AND PRINTERS

Even before Apple “cut the cord” between iOS devices and computers, printer and hard drive makers were ready with iPhone, iPod touch, and iPad-compatible peripherals that were previously used with PCs and Macs. Storage companies such as Kingston and Western Digital debuted wireless hard drives to store videos and other media files that wouldn’t as easily fit on iOS devices, and a couple of developers released iOS-ready printers: HP created an entire lineup of printers (\$80-\$450) to support Apple’s wireless AirPrint standard, and a company called Prinics developed a docking printer with iPhone, iPod touch, and iPad support.

Most of these wireless accessories depend upon product-specific apps released by their developers, but AirPrint is integrated into iOS: all you need to do is press three buttons from AirPrint-ready iPhone or iPod touch apps - an arrow button, the Print button, and then the Print button again from the Printer Options screen. If you don’t have an HP (or recent Canon) printer with AirPrint support, no worries: Netputing has a free PC/Mac app called AirPrint Activator that enables many other printers to wirelessly print from iOS devices using iTunes as a conduit.



If you need extra storage space, decide first whether you’ll use it at home or on the road.



VuPoint Solutions Photo Cube
Prinics’ Bolle Photo Printer is sold in the U.S. as Photo Cube, and makes picture printing dead simple. Connect your iPhone, iPod touch or iPad, load a free app, then tap to print 4”x6” borderless photos - 36 with each \$20 self-contained paper and ribbon cartridge. The quality’s more than acceptable for framing, and anyone can use it.

\$150



Western Digital My Book Live
Apple’s iOS devices are currently capped at 64GB of storage capacity, which isn’t enough to hold many movies, TV shows, or even large collections of music. The solution: load My Book Live up with 1/2/3TB (\$150-\$250) of content, plug it into your home router, and access everything wirelessly. A free app lets you stream from multiple iOS devices at once, and the drive can be accessed from iTunes without any special effort.

\$150

Kingston Wi-Drive
Unlike My Book Live, Wi-Drive trades raw capacity for completely portable convenience. Roughly the same size as an iPhone, this 16GB-32GB (\$130-\$175) unit wirelessly streams content to three iOS devices for around 4 hours between recharges. It creates its own 802.11g/n network, and includes a free app for videos, photos, and music.



\$130



Netputing AirPrint Activator
Apple’s AirPrint technology promised to let iPads, iPod touches, and iPhones wirelessly print documents with ease - assuming you buy a brand new printer with AirPrint support. If that doesn’t appeal to you, this free Mac and PC application does much the same thing: once installed, it unlocks AirPrint through your existing iTunes setup, letting you print to your choice of networked home printers. We’ve had pretty good luck with it so far, and hope that Apple makes the same feature possible without an app like this soon.

FREE



15 IPHONE + IPOD TOYS!

HELICOPTERS, MONSTER TRUCKS + TANKS

When Apple opened the App Store in 2008, iPhone and iPod touch games quickly became its most popular offerings, and they've remained top sellers ever since. Today, they're not the only ways to have fun with iOS devices. Wirelessly controlled toys have really taken off over the past year, starting with Parrot's \$300 AR.Drone, a brilliant but expensive quadcopter that's controlled by an iOS device over Wi-Fi. Less expensive helicopters have since been released, but they're not as cool.

Dexim went in a different direction with the \$70 AppSpeed Monster Truck, bundling a rolling, bouncing truck with its own transmitter dongle. And Brookstone released a spy tank that's more expensive but more capable. Like AR.Drone, it has a video camera and Wi-Fi inside, which some kids will find cool.

Coming late this year is Orbotix's new Sphero, a \$130 "robotic ball" that uses Bluetooth and a variety of different apps to let you control its movements. Packaged with an inductive charger, the 74mm plastic ball has colored lights inside, and the ability to switch into "boost" mode to climb occasional obstacles.



While AR.Drone is expensive, it does a lot. The cheaper iOS toys are a lot more limited.



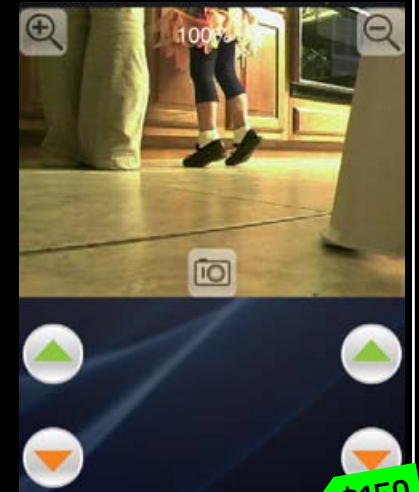
Dexim AppSpeed Monster Truck

Packaged with its own RF wireless dongle, this fun little truck is just big enough to look ready to climb over Matchbox cars - roughly the same footprint as an iPhone or iPod touch. Dexim's free DF Speed app (shown below) lets you use tilt or button controls to steer the truck and change its acceleration; the treads are capable of nimbly navigating on a flat surface and slowly moving through carpets or rough terrain. Unlike Rover, which requires six AA batteries to run, the Monster Truck has a USB-recharged battery inside, and runs for around 30 minutes per charge at a distance of 60 feet; you'll get more play time per session than AR.Drone. Additional AppSpeed vehicles, including a cool-looking race car, will join the Monster Truck soon.



Brookstone Rover

Armed with a front-mounted camera and tank-like treads, Rover allows you to drive this conspicuous but fun "spy tank" at a distance of 200 feet from your iOS device using integrated Wi-Fi hardware. An app gives you a realtime video feed of whatever the camera is seeing - including an Infrared night vision mode - plus the ability to control the tank with on-screen buttons or accelerometer-based tilting. Six AA batteries keep it rolling for extended sessions.



\$150



Parrot AR.Drone

As the most powerful and expensive iOS toy to date, AR.Drone features front and bottom-mounted cameras, four propellers to keep itself hovering and flying, and Wi-Fi hardware for a 160-foot range from your iOS device. You can record videos and make it fly for 15-minute stretches between extended battery recharges; it's super fun but benefits from having extra cells on hand.

\$300



16 CASES + STANDS

PROTECT, DECORATE, AND PROP IT UP

Over the past two years, iPod and iPhone cases have changed a lot: iPod shuffle and classic cases have all but disappeared from stores, iPod touch cases are somewhat popular, and iPhone cases are virtually ubiquitous. Stands, once common for iPods and iPhones, have now become nearly mandatory for iPads, while there's seemingly less desire to prop up smaller-screened devices.

There are still important types of cases and stands to consider. For iPod nanos, watch-style cases have carved out their own niche, led by Minimal's LunaTik series of metal and plastic bands. iPod touches have benefitted from some of the most streamlined and protective cases ever released for iPods - designs that cover everything except for the rear camera, microphone, speaker, and accessory ports. And iPhones have a wide variety of cases, led by Speck's CandyShells and OtterBox's Defender, both of which offer great protection for fragile iPhone glass.

Very adequate stands are now included with or built into some cases; if you need something with greater versatility, more complex stands cost \$30 to \$100. We've covered additional iPhone- and iPod-ready options in our past Buyers' Guides.



Protection, features, and cost are key when picking a case. Buy a stand only if necessary.

16 IPOD NANO (SIXTH-GENERATION)

ARMBAND + WRISTBAND CASES

H2O Audio Amphibx Fit

There are very few armbands being made for the iPod nano these days, and even fewer waterproof cases. Amphibx Fit is both, compatible with H2O's popular and reasonably priced series of waterproof headphones. Ideal for surfing and swimming, this touch-through armband also comes in larger sizes for iPod touches and iPhones.



\$50

iWatchz Carbon

Made from carbon fiber-textured leather with your choice of stitching threads and a stainless steel iPod nano mounting plate, Carbon doesn't protect the nano, but nicely shows it off and keeps it sturdy on your wrist.



\$50

Minimal LunaTik + TikTok

Probably the best-known of the iPod nano wristband options is LunaTik (\$70), an aluminum, steel, and sturdy silicone kit that wraps the sixth-generation nano in a metal frame and provides a high-end watch band to go with it. Now available in camo, black, silver, and red versions, LunaTik is a favorite of our editors. The less expensive TikTok (\$40) comes in black, white, or day-glo pink/green/blue versions, and is better for users who need to quickly snap the nano in and out - it's less protective, but super easy to attach and remove.



\$40+

Hex Vision Leather + Vision Metal

Offered in genuine leather (\$50) and stainless steel linked (\$70) versions, Hex's straps use a similar metal mounting plate to secure the nano. Vision Metal can be resized to your wrist if a jeweler or watch shop adds or removes extra links found in the package.



\$50+

16 **CASES + STANDS, CONTINUED****IPOD TOUCH + IPHONE 4/4S OPTIONS****Scosche kickBACK T4**

Nicely molded to the curved edges of the fourth-generation iPod touch, kickBACK T4 is relatively novel these days because of its slim integrated kickstand, which flips out from the back of the nicely rubber-lined, hard-plastic case whenever you need to watch a video. Packaged with screen film and a cleaning cloth, it's one of the strongest value propositions out there, and lacking only a little in lower front surface protection.

• \$30

Case Scenario Space Invaders Cases

Though we're generally not huge fans of snap-on hard plastic shells because of the poor anti-drop protection they offer for iPhones, metal-backed iPod touches are a little sturdier. Case Scenario has impressed us over the past year by choosing really cool licensed artwork to use on its plastic shells, including Pantone colors to appeal to creative professionals, and different Space Invaders prints for fans of retro video games. Only this one rainbow-toned version is sold for the iPod touch, while several others are available for iPhones and iPad 2s.



• 30€

**Speck CandyShell**

As the latest evolution of a case that's been amongst the industry's very best for several years, CandyShell for iPod touch has a soft rubber inner layer and a glossy hard plastic outside, plus soft button protectors on the top and side. Though Speck leaves you to protect the screen on your own, it's a beautiful design.

• \$35

**Incipio NGP Matte**

Elegantly executed, NGP Matte is the ultimate "got it right" refinement of an earlier design: sold in opaque and translucent versions, it nicely protects almost the whole touch, and includes screen film.

• \$25

Magpul Executive Field Case

That price tag's not a misprint: Magpul's iPhone 4/4S case comes in six colors and is made from a semi-hardened rubber also found in the company's gun accessories. It's been the case of choice for one of our editors for months, showing remarkably little wear and doing a great job of protecting everything save the iPhone's screen. Superb value.



• \$10

**OtterBox Defender Series Case for iPhone 4**

Particularly popular for the glass-bodied iPhone 4 and now available in a slightly modified version for the iPhone 4S, Defender combines a hard plastic inner frame with a thick rubber exterior and an integrated screen protector. It falls only a little short of true waterproof protection since it provides full access to the iPhones' speakers and microphones, but has set standards others have copied. A belt clip is included in the package.

• \$50

**Speck CandyShell Flip for iPhone 4**

Debuted for the iPhone 4 in early 2011, this evolution of the CandyShell is Speck's best yet for iPhone users, with a bottom flap that opens to guarantee compatibility with every docking accessory. The retooled iPhone 4S and CDMA iPhone 4 version expands the rear camera and side ringer switch holes. Great drop protection.

• \$40

**Proof Cases Duo**

Made from hard plastic with a soft touch rubber coating, the sharp-looking Duo provides substantial protection for the iPhone 4/4S, and uses a pop-off bottom panel for insertion. Screen film's included.

• \$30

**SwitchEasy Trim**

Particularly appealing due to its super-aggressive price and nearly complete iPhone 4/4S protection, Trim includes port covers and a frame with uniquely ridged sides. Seven different colors are offered as options.

• \$20



Be unique.



MobileBattery



Silicone Case Set for iPod nano



Crystal Cover Set for iPod classic



TPU Case Set for iPod touch



Sleeve Case Set for iPhone



Vertical Flip Style for iPhone



Flip Note Style for iPhone



Leather Cover Set for iPhone



Leather Smart Shell for iPad 2

Case-Mate Stacks

As one of the most creative iPhone 4 case designs we saw all year, Stacks is a kit with 10 interchangeable hard plastic pieces and a central spine-like frame, allowing you to mix and match the bands of color to create designs of your liking. While the hard plastic won't save your iPhone from a drop, it looks cool and staves off scratches.



\$35

Twelve South BookBook for iPhone 4

As the smallest version of a deliberately distressed leather book-style case for iPads and MacBooks, this BookBook doubles as a wallet with enough space for ID cards and cash.

\$60



Miniote iWood for iPhone 4

Deluxe in a way that most iPhone accessories could never aspire to be, iWood is the latest in a long-standing lineup of stunningly beautiful hand-carved wooden cases, offered in six different base woods with striped versions going for a premium. Made in Holland, the slider-style design is contoured to the curves of the glass and metal iPhones, with a special diffusion hole for the rear camera flash, and soft anti-scratch lining.

\$103

LuxMobile Lady Gaga iPhone Case

Featuring a clutch and Lady Gaga branding, this high-contrast faux leather case holds an iPhone 4/4S on one side, plus three ID cards and a house key. The iPhone holder pops out, too.

\$50



Unusual Studio VIP

With a back surface made from shiny, Chesterfield-styled faux leather in your choice of five colors, VIP distinguishes itself from virtually every other iPhone 4/4S case by looking way fancier than its low price would suggest. The rest of the snap-together shell is made from soft touch rubber-finished hard plastic.

\$26



Uncommon Capsule
Impressively designed to let users upload digital photos or use artwork, the colorfully inked iPhone 4 Capsule has a slide-off bottom for accessories. No screen film is included, but for a custom case, the price is right.

• \$40



Moshi iPouch
Rare is the sleeve-style case that we'd use, but this microfiber drawstring pouch with a really nice necklace is well-made and practical: it cleans the front and back of any iPod or iPhone, and holds earphones, too.

• \$23



Far more expensive than the typical stand, Rokstand is interesting largely because of the insane design details in the anodized aluminum frame: the Folding Stand here is compact enough to toss into a bag, while a Desktop Stand (\$169) is bigger and funkier. Both are designed to work with Rokform metal frame iPhone 4 cases.

• \$119



iFrogz BullFrogz
As one of a variety of different cases inspired by OtterBox's Defender, BullFrogz combines a hard plastic inner shell with a soft rubber outside in three different color combinations. To shave dollars off the price, BullFrogz doesn't include screen film or a belt clip, but if you're looking for body protection, this has it in spades.

• \$35



Element Case Ion
Though it's not the most protective case we've tested for the iPhone 4, Ion brings some Northern California style to the Apple case market. Combining a semi-firm rubber frame with a carbon fiber back plate, Ion offers passive screen protection in the form of a lip around the front; it leaves the top and side buttons unprotected, but does work with both the iPhone 4 and 4S.

• \$60

16 OTHER CASE CONSIDERATIONS

EVALUATING CASES BEYOND OUR PICKS



Body Coverage
Almost every iPod/iPhone case covers the device's back, sides, and top, with holes for buttons, ports, speakers, microphones, screen, and cameras. Steer clear of less protection.



What's Missing
Too few companies include screen film these days, allowing your screen to be scratched; vendors such as United SGP sell iPhone film for \$12+. Port covers, belt clips, and other frills are rare.



Materials
Don't trust wood, metal, thin plastic shells or film to protect your iPhone or iPod when you drop it. We've seen so much glass shattered that we strongly advise rubber-lined plastic.



Fair Pricing
iPod nano watch bands are \$40-\$70 based on materials. iPod touch/iPhone cases generally start at \$25 and go up to \$40, though leather cases can cost more. Be wary of \$50 cases unless they're great.

17 SCREEN FILM + BODY STICKERS

PROTECTION + DECORATION



Power Support Anti-Glare Film
We're huge fans of Power Support's Anti-Glare screen film, which keeps fingerprints and scratches from messing up the nano (\$10), touch (\$15), or iPhones (\$15). A must-have for every pocket device.

• \$10+



BodyGuardz Dry Apply
If you're willing to trust film to cover your iPod/iPhone's body, this is our top pick: side and back film starts at \$17, and is easy to apply without the need for liquid. For screen film, go with Power Support.

• \$17+



Wrapsol Ultra
You shouldn't expect it to protect your device against dents, but the Ultra full-body film is easy to install and provides nearly full coverage for your device's body. Wrapsol keeps releasing improved versions that are easier to use.

• \$30



Gelaskins Gelaskins
As the best decorative film we've seen for iPods and iPhones, these affordable stickers come in a huge variety of different and beautiful art prints, with front and back device coverage.

• \$15



18 EVERYTHING ELSE

IF IT DOESN'T FIT ELSEWHERE, IT'S HERE

Most iPod touch and iPhone accessories fall into neat little categories like the ones on the preceding pages - and have multiple good to great options - but there are a few accessories that are different from the rest and still worth showing off.

For instance, quite a few iPhone-specific keyboards have been released over the past year, but only one has really offered a solid enough improvement over the virtual iOS keyboard to be worth recommending. And though there are a bunch of GPS add-ons for iOS devices, only one we've tested makes a lot of sense to us at the price it's being sold for. They're both on the following page.

There are some nichey but interesting accessories, too: wearable video displays, color-shifting iPhone lamps, and health add-ons such as scales and blood pressure monitors, to name just a few. While their price tags and features are not universally appealing, they've been designed to appeal strongly to specific users, and succeed at least somewhat in doing so. We've selected only the most noteworthy units we've tested over the past year for this section, though there haven't been many of them. Health add-ons are growing at the most rapid rate.



When shopping for these gadgets, you may find non-iOS versions selling for much less.



Nuu MiniKey for iPhone 4/4S

Of all the add-on keyboards we've tested for the iPhone 4 and 4S, MiniKey is definitely the best - the rare physical keyboard that lets you type as well or better than Apple's virtual one, while freeing precious screen space. Backlit keys are part of the reason it gets only a few days to a week of active use between battery recharges.

\$70



Yantouch Black Diamond 2

Completely unlike anything else out there, this dock emits color with or without an iPhone 4/4S inside, transforming into a programmable mood light with a free iOS app.

\$59



Vuzix Wrap 1200

With DVD-quality screens inside a headset, Wrap 1200 lets you watch 2D/3D videos, and includes canals to immerse you in their audio portions. Made for those who don't want to hold iPhones/iPods during movies.

\$500



Dual Electronics XGPS150 Universal GPS

Whether you're using a GPS-less iPod touch or Wi-Fi-only iPad, or just interested in boosting the GPS power of your iPhone or 3G-ready iPad, XGPS150 can help. The rechargeable battery-powered unit connects to your iOS device with Bluetooth, feeding multi-satellite location data to GPS-hungry apps; realtime turn-by-turn, flight, and nautical navigation are all possible so long as your device has built-in or Internet-accessed maps.

\$100

Withings Smart Blood Pressure Monitor

Pricy but nicely designed and very portable, this very cool blood pressure cuff integrates with Withings' increasingly powerful free app to add pulse and heart rate tracking to its prior weight monitoring features. Powered by four AAA batteries, this accessory is capable of inflating itself on your arm when connected to any recent iOS device.



\$130

Use coupon code: **ilounge** for **50%** off entire order!

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2012 BUYERS' GUIDE

ACCESSORY GUIDE



Apple Digital AV Adapter

Compatible with the iPod touch 4G, iPhone 4, iPhone 4S, and both iPads, this adapter outputs up to 1080p HD videos and audio through an HDMI port. Unfortunately, you'll need to supply the HDMI cable yourself, as well as a Dock Connector cable and power adapter if you want to charge your iOS device at the same time.

\$39

Ten One Fling Mini

Sold as a set of two with a soft carrying bag, Fling Mini is a joypad overlay for the iPhone and iPod touch, using two suction cups to attach itself to the left or right side of either device's screen, while using a translucent spiral to keep the hard plastic joypad in place atop an on-screen controller. In concept, Fling Mini gives you a little extra tactile control over a virtual joystick, and if you can find a game with twin sticks, you can use both Fling Minis at once. While the idea's not bad, you obscure additional real estate on the screen. The iPad version is less intrusive.



\$25



Cobra Tag

Like Kensington's BungeeAir but without the battery case, Tag pairs with an iOS app to let you know when either the keychain or your device is lost; Tag and the app can make each other ring.

\$60



Nike/Apple Nike + iPod Sport Kit / Sensor

Sold as a shoe-mounted sensor (\$19) or sensor and receiver set (\$29), this accessory tracks runs and syncs data to Nikeplus.com. Current iPod nanos only need this kit for better tracking accuracy. iPod touches need only the sensor; iPhones can use a \$2 Nike+ GPS app.

\$19+



Simplism Nike+ Holder

There are two ways to use the Nike + iPod Sensor: with a pair of Nike+ shoes, or with a cheaper accessory like this. You can attach one of these sturdy, cheap silicone rubber holders to your shoelaces, pop the Sensor inside, and seal it up. It's effortless, and the Sensor detects your strides.

\$10

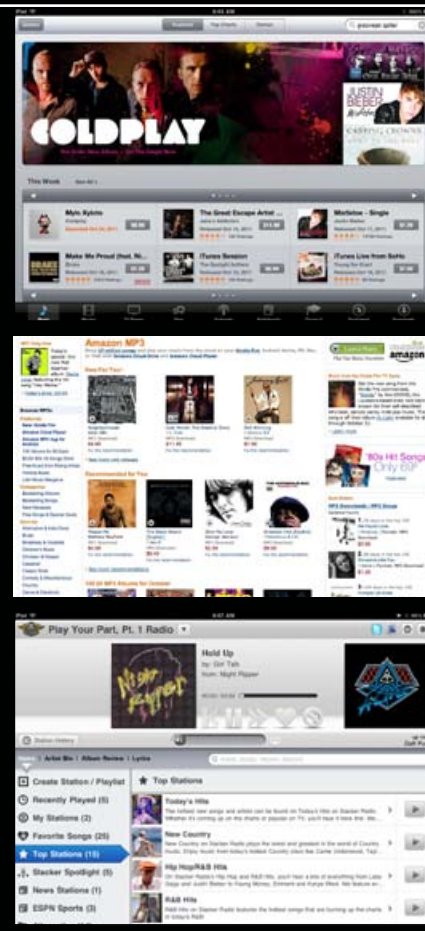
19 SHOP FOR CONTENT

TIPS ON BUYING MUSIC, BOOKS + MORE

MP3/AAC Music

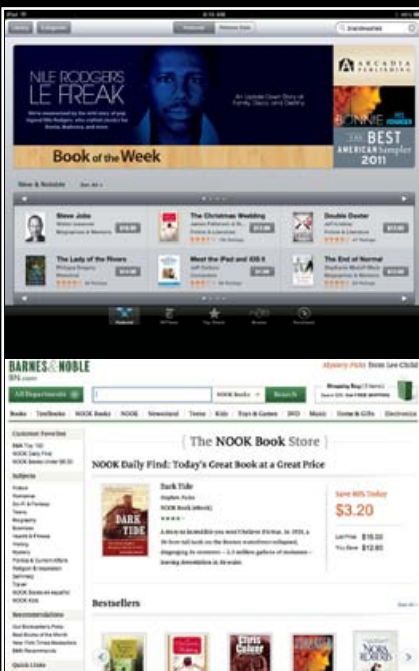
Apple has declared the iTunes Store to be the exclusive direct-to-iOS seller of music - the iTunes application is the only way you can purchase songs directly from an iPhone or iPod touch and start listening immediately after the download completes. Unfortunately, many of the iTunes Store's songs now sell for \$1.29 a pop, even when they're offered for less at Amazon.com and competing international stores. Apple offsets the extra cost by offering extra value: once you've purchased a song from the iTunes Store, you can redownload it as many times as you want from iTunes in the Cloud. However, Amazon now routinely offers lower prices than Apple's for music that most users will find sonically trouble-free: 256Kbps MP3s, which are very close to CD quality. Outside the U.S., users may have fewer legal digital music purchasing choices, with iTunes the only real alternative to pirating music en masse.

Subscriptions are also an option in some places: services such as Slacker Radio, Spotify, Rdio, and Rhapsody each provide unlimited streaming (and sometimes limited on-device storage) of tracks as long as you continue to pay around \$10 per month. It's a good way to discover music.



Digital Books + Magazines

Apple's iBookstore now competes with Amazon's Kindle and Barnes & Noble's Nook digital bookstores, offering somewhere around 200,000 books - fewer than its rivals. The iBookstore generally sells books for \$10 to \$15, and gives away classic books at no charge. For the time being, the iBookstore's selection and pricing are only okay, but Apple offers a more convenient purchasing experience than the others; Amazon and B&N require you to shop on their web sites, while Apple does not. On the other hand, Amazon's and B&N's books can be read on computers and inexpensive digital book readers. Apple still has not announced Mac or PC support for iBooks downloads, but some of our editors prefer to buy from the iBookstore due to the superior interface iBooks offers for reading. For the time being, next-gen books and magazines are being offered as apps, not in iBooks.

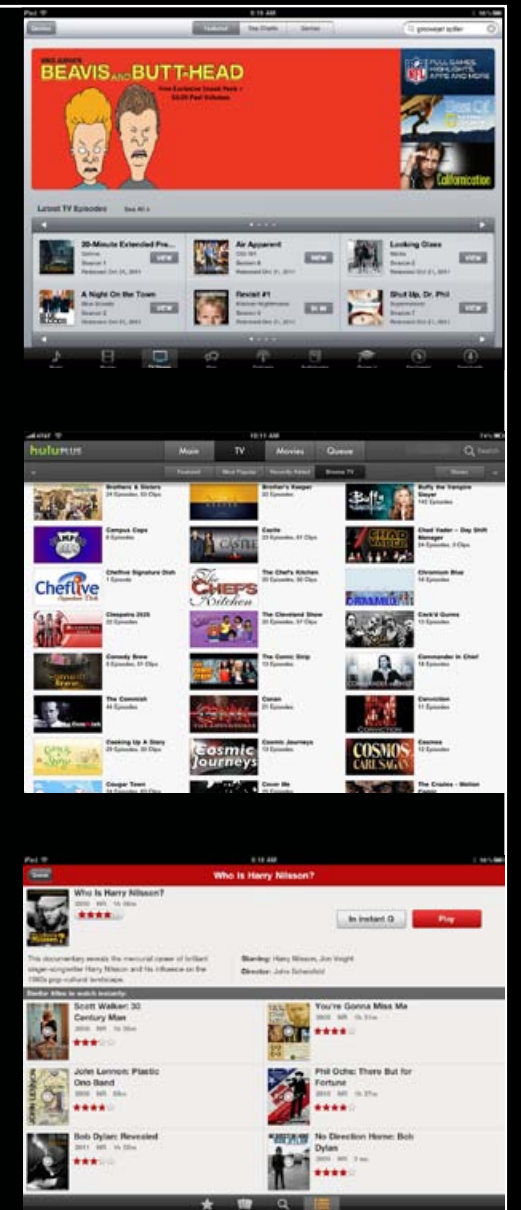


MP4/H.264 Videos

As with music, Apple's iTunes Store is the exclusive direct-to-iOS seller of videos, including TV shows, movies, and music videos. Although the quality of these videos is high enough to make great use of the latest high-resolution iPhone, iPod, and iPad screens, they are expensive, with TV shows commonly selling for \$2-\$3 each, and movies for \$10-\$15. The sheer quantity of free or low-cost streaming alternatives is dramatically higher, depending on what you're looking for.

In the United States, many brand new TV shows are also available through Hulu Plus, an iOS app with a \$8 monthly all-you-can watch subscription fee. Hulu also offers a number of decent movies, but it's strongest for U.S. network TV. Competitor Netflix offers a \$8 monthly subscription with unlimited iOS streaming access to a huge collection of decent movies and season-old TV programming, with heavy children's content and documentaries offering the greatest appeal. Netflix's service also works on the current Apple TV.

While Amazon and other companies sell some of the same TV shows and movies as Apple does, the compatibility of the video files varies, and the price differences are rarely as sharp as with music sold through iTunes. If the videos aren't copy protected, they can be converted into iPod/iPhone-friendly formats with one of several dozen conversion tools; iTunes may be able to convert them with a simple right-click.



Apps + Games

Once again, Apple is the sole official direct-to-iOS provider of applications and games for these devices; the company has frozen its rivals out by denying warranty coverage to jailbreakers. For this reason, we do not recommend jailbreaking.

The App Store has absolutely exploded in popularity over the past few years, and now boasts over 500,000 apps and games, 350,000 of which are for the iPhone and iPod touch. Aggressively priced software starts at free and averages \$1.50 per download, with "premium" games going for \$8 a piece - prices that strongly disincentivize piracy and encourage impulse purchasing. Developers now actively use In-App Purchases of items and unlocked features to try and earn more money from their customers, an iffy practice.



TOP 100 games of 2011

Judged through history's lens, Apple's initial approach to pocket gaming was almost comical. In late 2006, it released the first in a series of old-fashioned games that were remade to accommodate the iPod's unusual Click Wheel. Nearly two years passed before Apple allowed developers to create iPod touch and iPhone games, but since then, the results have spoken for themselves: Click Wheel iPods tapped out at 50 Apple-released titles, and iOS devices now have over 500,000, with great games routinely priced at \$1, \$5, or \$8. The App Store has been so successful that Nintendo's and Sony's new portable consoles are struggling to compete with devices that lack physical joysticks and buttons - no one could have imagined that.

iLounge now reviews games hand-picked from the thousands that flood the App Store each month. Inside, you'll find our top 100 picks across 10 genres, ranging from console-rivalling action games to uniquely iOS-ready puzzle titles. Most are sold in universal iPod, iPhone, and iPad versions; we strongly support developers who create device-agnostic titles, and hope that you do the same.



TOP 100 GAMES OF 2011: ACTION + ARCADE GAMES

2012 BUYERS' GUIDE



Gameloft rocked 2011 with a collection of console-caliber action titles, including the PlayStation Uncharted series-inspired **Shadow Guardian** (\$7, above), the Max Payne-like gritty cop adventure **9mm** (\$7, left), and the colonial sword-slashing platformer **BackStab** (\$7, below), each with great 3-D graphics and voice acting. EA had a big hit with **Dead Space** (\$7, bottom left), a dark sci-fi adventure filled with horrific alien encounters, based on its console franchise of the same name.



2012 BUYERS' GUIDE

TOP 100 GAMES OF 2011: ACTION + ARCADE GAMES



Thanks to its Unreal Engine 3 - sophisticated 3-D game development tools - Epic Games made a huge mark on iOS devices in 2011, releasing multiple updates to its amazing one-on-one swordfighting and questing game **Infinity Blade** (\$6, above), and empowering developers such as Phosphor Games to release realistic action titles such as the survival horror combat game **Dark Meadow** (\$6, below). Both universal titles redefined what iOS devices were capable of, including iPad-specific visual optimizations.



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TOP 100 GAMES OF 2011: ACTION + ARCADE GAMES

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The fighting and platform genres both had a banner year on iOS devices. Midway's classic one-on-one fighting game **Ultimate Mortal Kombat 3** (\$5, above) bested rivals with Retina Display support and updated 3-D versions of the arcade game's 2-D backdrops. Major updates to SNK Playmore's **King of Fighters-i** (\$7, inset above) and Capcom's **Street Fighter IV Volt** (\$7, right) brought new characters and backgrounds to two other popular fighting franchises, neither with Retina Display art. Fenix Fire's **Roboto** (\$4, inset right) demonstrated how a cute 2-D platformer with a robotic hero could be enhanced with occasional 3-D elements, while SilverTree Media's **Cordy** (\$5, below) tackled a similar robot platforming theme with truly astounding 3-D art, bringing gameplay elements from Sega's well-known Sonic the Hedgehog series into a fresh, gadget-heavy and challenging new set of 27 levels.



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Sold in separate iPad and iPhone/iPod touch versions, Zynga's **Words with Friends** (\$2-3, top center) and **Hanging with Friends** (\$2, below) let gamers play Scrabble and Hangman against several people at once, asynchronously.

TOP 100 GAMES OF 2011: BOARD + TABLE GAMES



17.62
Considering the most common cause of death related to food allergies, which mascot might one day become a MURDERER?
Mr. Peanut
Mr. Potato Head
Mr. Coffee
Charlie the Tuna
\$3,142

In addition to some less than inspired updates to game show titles such as Wheel of Fortune, Jeopardy, The Price is Right, and Press Your Luck - titles that didn't make our top 100 due to unimpressive developer support - there were a bunch of releases that brought new energy and excitement to classic board and table games. NaturalMotion's **Jenga** (\$1, above right) leveraged the high-resolution screens and touch/gyroscope controls of modern iOS devices to recreate the classic wooden tower construction and deconstruction game in highly believable 3-D; separate versions are sold for iPads and iPod touches/iPhones. Gameprom added to its excellent series of pinball games with **War Pinball** (\$1, center), a title with separate tables for the movies Missing in Action, Navy Seals, and Platoon, each with individual voice samples, music, and 3-D art. And Jellyvision brought the classic computer trivia game **You Don't Know Jack** (\$3-5, below left) in separate iPad and iPhone/iPod versions, complete with the series' trademark offbeat humor and free episodic updates.

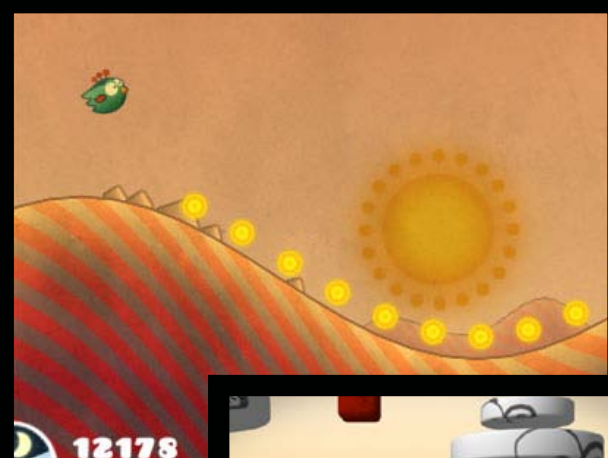
TOP 100 GAMES OF 2011: CASUAL + MINI GAMES

2012 BUYERS' GUIDE

Small games that could never be sold in retail boxes have become dominant in the App Store, using super-low prices and simple hooks to completely addict iOS gamers.



No company has blended funny, cool and simple as effectively as Halfbrick Studios, whose **Jetpack Joyride** (\$1, top) set a new standard for addiction by using a one-button control scheme to let you adjust the height of a flying hero whose constantly evolving coin, outfit, and gravity-shifting challenges will bring you back for hundreds of games. Andreas Illiger's **Tiny Wings** (\$1, top right) used a one-button jump/fly mechanism with a cuter theme and zen-like rolling hill backgrounds to achieve mass appeal; like Jetpack Joyride, it changes the levels a little every time you play, here focusing on shifting the graphics, and pushing you to make your flight-challenged bird fly for as long as possible before night falls and ends the game. By comparison, Mikrotie's **Treemaker** (\$1, center right) and Chillingo's **Swing the Bat** (\$1, lower right) offer different takes on grappling-hook swinging platform action; Treemaker has you cast a rope and then swing between 3-D platforms, while Swing the Bat lets a bat move between bamboo branches and collect fruit while enjoying colorful 2-D cartoony scenes.



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After the global success of Rovio's slingshot tower destruction title, casual game developers all wanted to make the next Angry Birds - including Rovio, which released **Angry Birds Rio** (\$1-3, center right) as a similar movie tie-in sequel.



Pan Vision's **Pirates vs. Ninjas vs. Zombies vs. Pandas** (\$1, above) was a blatant but funny and tweaked Angry Birds clone.

Infinite Dreams tried a different spin with **Shoot the Birds** (\$1, above), a bow and arrow bird shooting title with gorgeous graphics and increasingly hard levels. It also released **Can Knockdown 2** (\$1, center right) with flick-to-toss-balls challenges.



Duello's **iSlash** (\$1-\$2, below left) lets you swipe to hack off pieces of wooden boards until you reach size goals; Bulkypix's **Burn It All** (\$1, below right) has you ignite ropes to clear each screen as fast as you can.

Gamedoctors' **Zombie Smash** (\$1, left) turned zap and swipe gestures into a fun way to stop zombie attacks on a series of bases.



TOP 100 GAMES OF 2011: DRIVING + FLYING GAMES

2012 BUYERS' GUIDE



While the 3-D driving game genre had a good 2010, it really moved forward again in 2011. Gameloft introduced **Asphalt 6: Adrenaline** (\$1, top) as a seriously impressive arcade-style racer inspired by Namco's Ridge Racer series and any number of similar arcade racing games. Over 40 different licensed cars race through 55 different events, including speed, drifting, and opponent-smashing challenges. Also by Gameloft, **Fast Five the Movie: Official Game** (\$5, top right) uses an equally impressive 3-D graphics engine with even more dangeous environments, letting you briefly rewind and try a sequence again when part of the level comes crashing down on your car. If you want more realistic driving than the Gameloft titles, EA's **Shift 2 Unleashed** (\$3-5, center right) continues the Need for Speed Shift series, letting you race 40 licensed cars across tracks based upon real cities. Both the iPad versions of Shift 2 and Firemint's **Real Racing 2** (\$5-7, lower right) include video-out/AirPlay-out support to turn your iPad into a tilting controller for HDTV driving; Real Racing 2's more impressive, with 15 higher-resolution tracks and 30 detailed, damagable cars. Sega's **Sonic & Sega All-Stars Racing** (\$3) is the only universal game in this bunch, offering cartoony Mario Kart-like fun.



2012 BUYERS' GUIDE

TOP 100 GAMES OF 2011: DRIVING + FLYING GAMES



Two particularly impressive overhead driving games rolled onto iOS devices this year: Polarbit's **Reckless Getaway** (\$3, top) is the sequel to last year's hit Reckless Racing, putting you in control of a getaway car escaping from the police after bank heists, while Remedy Entertainment's **Death Rally** (\$1, center) combines driving and weapon combat in gritty landscapes. Both titles are universal, and have received laudably major post-release updates.



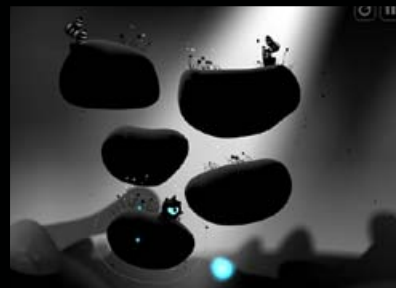
The flying genre was poorly represented in 2011, with only a few standout titles. Kiloo Games' free **Frisbee Forever** (upper left) transforms Wham-O's classic toy into a neat little action game where you steer a disc through hoops and collect stars within detailed 3-D worlds. Cinemax's **Gyro13** (\$6) uses the Unreal Engine to power a side-scrolling, steampunk-influenced remake of the classic computer game Choplifter, challenging you to rescue miners trapped in polygonal mines. Finally, Frozen Pepper's **RC Plane 2** (\$1) lets you use RC-style controls to fly four different planes in two different worlds, with extra planes as in-app purchases.

TOP 100 GAMES OF 2011: PUZZLE ACTION GAMES

2012 BUYERS' GUIDE



iOS puzzle games went from good to great in 2011, with **iBlast Moki 2 HD** (\$3-\$5, above) from Godzilab as an example of awesome art, super-smart bomb and timing puzzles, and great use of the iPad/iPhone/iPod touchscreens. Two additional titles, Chillingo's **Contre Jour** (\$1-\$3, center left) and 2D Boy's **World of Goo** (\$2-\$3, center right) look like blob-themed siblings, but differ significantly in gameplay. Both games have somewhat dark, dystopian themes with eyeballed protagonists, but *Contre Jour* focuses on terraforming platforms and getting one character to an exit, while *World of Goo* is about using multiple goo balls together to help multiple characters to an exit. Each is a moody and beautiful puzzler. Another dark gooball game, **Perfect Cell** (\$3, lower right), is Mobigame's grittiest title yet, featuring flying, dangerous organisms attempting to escape maze-like levels filled with gun-wielding men.



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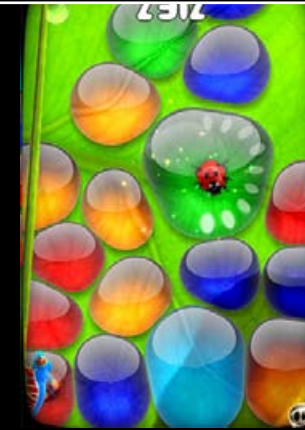
TOP 100 GAMES OF 2011: PUZZLE ACTION GAMES



Playpen Studios' **Skillz for iPad** (\$6, above) has a lot in common with the console DJ Hero series, challenging you to tap and scratch along with licensed tracks. EA's **Rock Band Reloaded** (\$5-10, left) lets you tap along to 35 licensed songs.



Now universal, MumboJumbo's **Luxor: Amun Rising HD** (\$5, top) has you swipe a cannon from left to right at the bottom the screen, matching colored balls with a snaking line. Crescent Moon's universal **Gears** (\$2, center) challenges you to navigate a ball through beautiful steampipe mazes. And Gameloft's **Block Breaker 3 Unlimited** (\$1, bottom) is the ultimate Breakout game, with insane intensity and a huge variety of multi-screen levels.



Using a really neat fluid-simulating graphics engine, EA's relaxing, nature-themed puzzler **Liqua Pop** (\$1, top) lets you drag same-colored drops of liquid together to create explosions, until a left-of-screen frog can escape each level. Adult Swim's trademark quirky humor and crazy Japanese-ish pixel graphics help the swipe-to-match colored floors game **Monsters Ate My Condo** (\$1, second from top) stand out from everything in the App Store. **Cut The Rope: Experiments** (\$1-2, third from top) is Chillingo's semi-sequel to last year's hit "feed candy to the little monster" game, once again challenging you to move the candy around the screen with snippable ropes, gravity, and helper objects. Finally, Full Fat Productions' **Coin Drop!** (\$1, bottom) is akin to PopCap's *Peggle*, with 50% added cuteness: you drop coins from the top of the screen, demolishing obstacles in an effort to smash bad pennies and rescue girl coins.

TOP 100 GAMES OF 2011: PUZZLE THINKING GAMES

2012 BUYERS' GUIDE



Some of the puzzle games here are less about twitch reactions than smart thinking. Mediocre AB's nicely done **Sprinkle** (\$1, above) offers around 50 levels where you spray realistically-animated water into nooks and crevices to put out fires. Disney's **Where's My Water?** (\$1, left) has a very similar theme with more cartoony graphics and its own collection of 80 different puzzles. By contrast, Disney's universal **The Incredible Machine** (\$3, bottom left) and the iPad-only **Casey's Contraptions HD** (\$3, bottom right) by Snappy Touch are both Rube Goldberg-style puzzlers, challenging you to assemble machines from dozens of items, using motion and gravity to achieve different goals. Each game has over 70 different puzzles; Casey's Contraptions includes a level building tool.

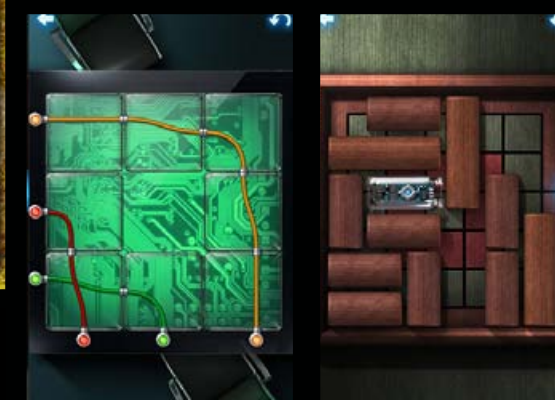


2012 BUYERS' GUIDE

TOP 100 GAMES OF 2011: PUZZLE THINKING GAMES



As the newer iPad version of one of our very favorite iPhone/iPod touch puzzlers, **Mayan Puzzle HD** (\$3, left) by Mind Crew is amongst the most overambitiously illustrated titles in the App Store: the core gameplay involves solving 50 occasionally brilliant block-matching puzzles, each requiring you to eliminate all of the colored blocks on screen with the correct sequence of limited-swipe moves. It's the game's haunting soundtrack and insanely beautiful backgrounds that really stick in your head, though; their naturally-inspired beauty and elemental special effects keep the puzzles from feeling stale or repetitive even after hours of testing solutions.



Using a cool fakeout that's neat enough not to ruin, Tap Tap Tap's **The Heist** (\$3, above) features a collection of 60 hacking-themed puzzles that become progressively more challenging as you work to break into a vault; there's actually a downloadable prize if you solve enough levels to succeed.

Given a limited number of "pushes," you attempt to solve the puzzles in IndiePub's iPad-only **Fractal: Make Blooms Not War** (\$2, below) by creating clusters of like-colored pieces on a hexagonal grid. With a techno soundtrack and neat camera shifts during dramatic moments, it's atypically stylish.



Truly weird in a good, Japanese way, **Popstar Physics** (Free, left) is the sequel to cult puzzle game Save Toshi DX; you launch balls to knock over 3-D structures and crush zombie clones of the prior title's heroine.

TOP 100 GAMES OF 2011: RETRO GAMES

2012 BUYERS' GUIDE



Early iOS retro games were content to merely mimic past arcade and console successes, but 2011's releases started to show signs of serious evolution. Shockpanda's **Cubes vs. Spheres** (\$1, above) uses its titular shapes to create an impressive virtual reality experience, letting you flick to launch different types of balls from one side of a 3-D arena towards waves of advancing cubes. Another blocky game, Mobigame's **Edge Extended** (\$1, top right), is a sequel to the early and excellent cubic platformer Edge, but with a new 3-D engine that allows levels to be shown with what looks like a bent, wide-angle lens. Gamevil's **Kami Retro HD** (\$3, center right) is a platform game that initially looks to be inspired by Super Mario Bros. - complete with polygonal pixel art - but quickly reveals itself to be a Lemmings-like puzzler with interesting platform-moving and timing challenges. Based loosely upon the graphics engine in its impressive Space Invaders: Infinity Gene, Taito's **Groove Coaster** (\$3, bottom left) is a mesmerizing rhythm tapping game with a ton of included songs and a neat theme: you follow a rollercoaster-like track through wireframe polygonal worlds akin to Sega's famous Rez. And Chillingo's **Infinity Field** (\$1-\$2, bottom right) offers an evolved take on Activision's Geometry Wars, complete with intense particle effects, music and camera work.



2012 BUYERS' GUIDE

TOP 100 GAMES OF 2011: RETRO GAMES

Some of 2011's biggest retro releases were remakes of classic games. **Galaga 30th Collection** (Free, left) is Namco's slightly updated repackaging of arcade shooters Galaxian, Galaga, Gaplus and Galaga '88; Galaxian's free, with the other three sold as an \$8 in-app purchase. Warner Bros.' **Tapper World Tour** (\$1-\$2, center) is an overhauled, nicely redrawn, and globalized rethinking of the arcade game Tapper, featuring a bartender who moves between counters serving drinks to advancing customers. Unlike Galaga, it's non-universal.



Straight ports of old arcade and console games also became possible thanks to emulators that run quickly on Apple's latest devices. Konami's **X-Men** (\$1, top right) brought the side-scrolling beat-em-up to iPads, iPhones, and iPods, complete with all the voice samples and impressive animation of the original arcade game. Sega's **Streets of Rage 2** (\$3) and **Gunstar Heroes** (\$3) turn two of the most memorable Sega Genesis/Mega Drive games into iPhone/iPod titles with virtual controls, the former with memorable Yuzo Koshiro music, and the latter an early example of the intensity former Konami developers at Treasure could bring to 16-bit consoles. Another emulator, **Capcom Arcade** (Free), sells three Street Fighter 2 versions, Super Puzzle Fighter II, Final Fight, Ghosts 'n Goblins, two Ghouls 'n Ghosts games, Commando, 1942, 1943, and Magic Sword for \$1 each or \$10 together, a steal given the length and depth of each classic title.

TOP 100 GAMES OF 2011: RPG + STRATEGY GAMES

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The latest crop of iOS role playing games has come even closer to a full console gaming experience. Limited solely to the iPad 2, Amanita Design's **Machinarium** (\$5, top) is a gorgeously illustrated, steampunk-influenced point-and-tap adventure game filled with puzzles that your robot hero Josef must solve. Sold in separate iPad and iPhone/iPod versions that even fans have found objectionably priced, Square Enix's polygonal remake of the 8-bit Nintendo classic RPG **Final Fantasy III** (\$16-\$17, top left) nonetheless has one of the most completely realized stories and team-based battle systems in the App Store. Gameloft used the later Final Fantasy VII as the inspiration for its much more reasonably priced **Eternal Legacy** (\$1-\$7, second left), featuring more realistic characters in a futuristic fantasy setting, with weak voice work; its **Dungeon Hunter 2** (\$7, third left) and Crescent Moon Games' universal iOS game **Pocket RPG** (\$5, bottom left) offer isometric overhead perspective questing action RPGs with more hacking and slashing. Then there's Cappybara Games'



Superbrothers: Sword & Sworcery EP (\$5, bottom right), a point-and-tap title with 8-bit-styled art, beautiful music, smart puzzles, and a unique flipped-orientation boss combat system.

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TOP 100 GAMES OF 2011: RPG + STRATEGY GAMES



Gameloft's **Starfront: Collision** (\$5-\$7, far left) is an iOS take on Blizzard's sci-fi strategy hit Starcraft, including 20 single-player maps and four-player multiplayer. **Great Little War Game** (\$1, closer left) is Rubicon's cartoony 3-D polygonal take on Nintendo's popular Advance Wars series, with grid- and turn-based army-versus-army combat.



Nimblebit's **Tiny Tower** (Free, left) and Kairossoft's **Mega Mall Story** (\$4, below) are addictive "building and business management" games with 8-bit art. Tiny Tower is a little more people-focused, while Mega Mall considers the environment surrounding the mall.



Chillingo's **Anomaly Warzone Earth HD** (\$4, center) is an amazing futuristic take on the tower defense genre, complete with detailed overhead 3-D graphics that work on all iOS devices, with special iPad 2 enhancements. Subzero.eu's **Zen Wars** (\$1, below) remakes Atari's action-strategy game Rampart with Asian themes, featuring separate Tetris-style fortress building and cannon-firing sections.

TOP 100 GAMES OF 2011: SHOOTING GAMES

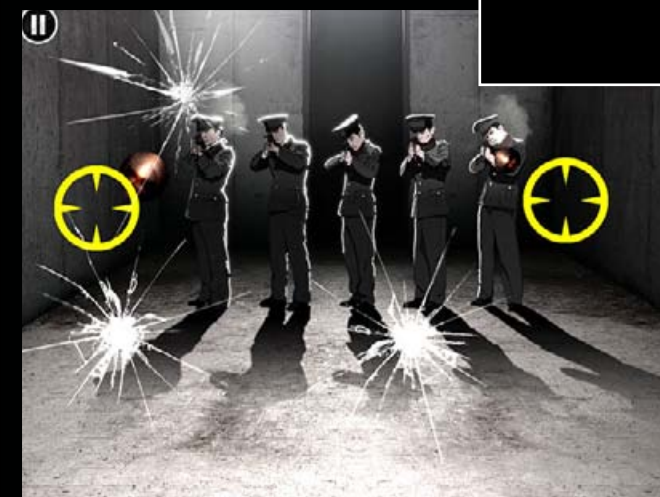
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First-person shooters become more impressive every year on iOS devices, so it's no huge surprise that 2011's titles were the best yet. Gameloft's **Modern Combat 3: Fallen Nation** (\$7, above) delivered a console-rivalling "invasion of America" experience in the vein of Call of Duty: Modern Warfare, complete with incredible 3-D graphics and audio. id Software's **Rage HD** (\$2, top right) fused the grimy worlds and mutant enemy sensibilities of Doom and Quake with an on-rails, killing game show theme. Both titles are iOS-universal. **N.O.V.A. 2** (\$7, center right) continued Gameloft's Halo-alike sci-fi shooting series, improving the quality of the art and slightly diversifying the run-and-shoot gameplay with vehicles. EA's **Battlefield 2: Bad Company** (\$3-10, lower right) offers a modern and realistic wartime experience with 5 different environments. These two are sold in separate iPhone/iPod and iPad versions.



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TOP 100 GAMES OF 2011: SHOOTING GAMES

While Amnesty International's **Bulletproof** (\$1, top) sought to shock gamers with a minigame about the viciousness of executions, Madfinger's **ShadowGun** (\$8, center) is the App Store's first Gears of War clone, featuring an over-the-shoulder view of a mercenary hero who blasts his way through beautifully detailed 3-D environments. Puzzles and pop-out-from-cover action break up the shooting. Both games are universal for iPads, iPods + iPhones.



Gameloft's **Rainbow Six: Shadow Vanguard** (\$7, inset top right) brought the squadron-based strategic action of Ubisoft's famous console games to iOS devices, complete with voice acting and great graphics. The Japanese "bullet hell" shooter experts at Cave released the bizarre but fun side-scroller **Deathsmiles** (\$12, middle right), which is crazy expensive for an iPod touch/iPhone-only title, but offers funny, goth-themed over-the-top intensity. Limbic's universal **Zombie Gunship** (\$1) lets you slay undead armies as they proceed towards military bases; a unique night vision view and voiceovers make it fresh.



TOP 100 GAMES OF 2011: SPORTS GAMES

2012 BUYERS' GUIDE



While traditional sports games didn't make a big leap forward in 2011, there was genuine excitement in some unexpected places. Bravo Game Studios' **Xtreme Wheels** (\$4, above) used great 3-D graphics and a realistic ragdoll physics engine to create motorcycle-themed puzzles; you need to balance momentum, gravity, and the special handling characteristics of your bike to make it to each of over 20 finish lines.

Gameresort's long-awaited **Downhill Bowling 2** (\$2, top left) moves bowling balls out of confined alleys into natural settings, letting you jump platforms and knock down pins across 12 different levels. Full Fat Productions' **Flick Golf Extreme** (\$1-\$4, bottom left) lets you tee off far away from traditional golf courses, letting you play through an oil rig, skyscrapers, and even an aircraft carrier. Illusion Labs went way beyond its early iOS skateboarding game Touchgrind with **Touchgrind BMX** (\$4, bottom right), a universal iOS BMX bike simulator with a really impressive third-person 3-D engine, TV-out support, and stunt tracks with wildly different, globally-inspired visual themes.



2012 BUYERS' GUIDE



TOP 100 GAMES OF 2011: SPORTS GAMES

Though it hasn't evolved dramatically from its namesake 1994 arcade game, the two-on-two basketball game **NBA Jam** (\$1-\$5, left top) is one of the most addictive sports titles released for iOS devices this year, featuring key players from all 30 NBA teams, plus unlockable hidden characters ranging from the Beastie Boys to team mascots and politicians. NaturalMotion's **NFL Rivals** (\$1, left middle) and **Icebreaker Hockey** (\$1, left bottom) radically simplify football and hockey by giving you control over only one player on either offense or defense, letting him take repeated scoring or score-preventing opportunities that require tilting, dodging, turbo speed, and spinning; you get extra points for showboating on your way to a goal. Both games are universal for iOS devices. Full-fledged sports games had a weak year thanks to bugs and other issues with a number of EA's biggest franchises, but **FIFA Soccer 12** (\$5-\$10, below) was an exception, featuring impressively detailed 3-D graphics on each Apple device - sold separately - plus real players, great controls, and the great crowds FIFA's known for.



Boxing games improved in 2011 thanks to two releases that outclassed prior iOS games. EA's **Fight Night Champion** (\$5, upper right) borrows 20 of the characters from the same-named console game, enabling you to take control of Mike Tyson, Evander Holyfield, Muhammad Ali, Manny Pacquiao and Oscar De La Hoya. Natural-feeling controls, respectable 3-D graphics, and a mix of different action and post-round strategic elements make the game legitimately cool. Taking a totally different angle, Goodhustle Studios' **Beast Boxing 3D** (\$2) provides a first-person view of monster and animal-inspired foes, each rendered in cartoony 3-D; here, the emphasis is on fun. Oddly, neither game has true iPad support.



100 ESSENTIAL iOS APPS OF 2011

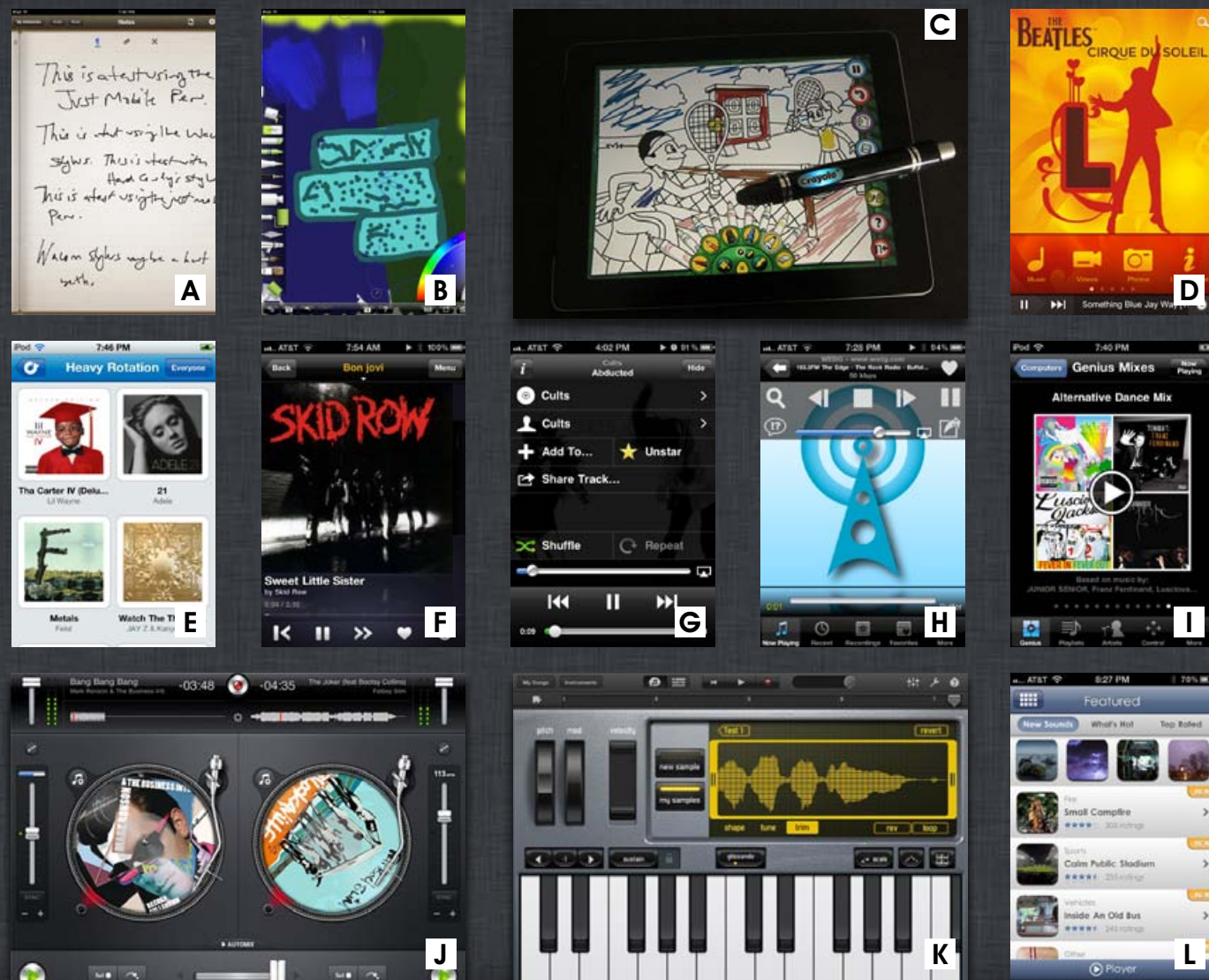


Something different happened this year when our editors gathered to discuss 2011's **100 essential apps**: unlike games, which rarely last for a year before a better sequel or alternative appears, many of today's most important apps turned out to be updates to ones we were using last year, and in some cases the year before. Assembling a list purely composed of brand new apps wouldn't have been useful. So we didn't.

Instead, we canvassed all of our reviews and our many iOS devices, searching for apps that continue to offer excellent utility, interface design, and value. Roughly half of the 100 selections on the following pages are new for 2011, and the other half are titles that our editors have kept on their first or second Home Screens, coming back to them again and again. In some cases, particularly music subscription services and photo editing tools, different editors had their own favorites, so we've included a bunch for your consideration. The common thread here is that all of our picks are standouts in the App Store, which today boasts over 500,000 titles.



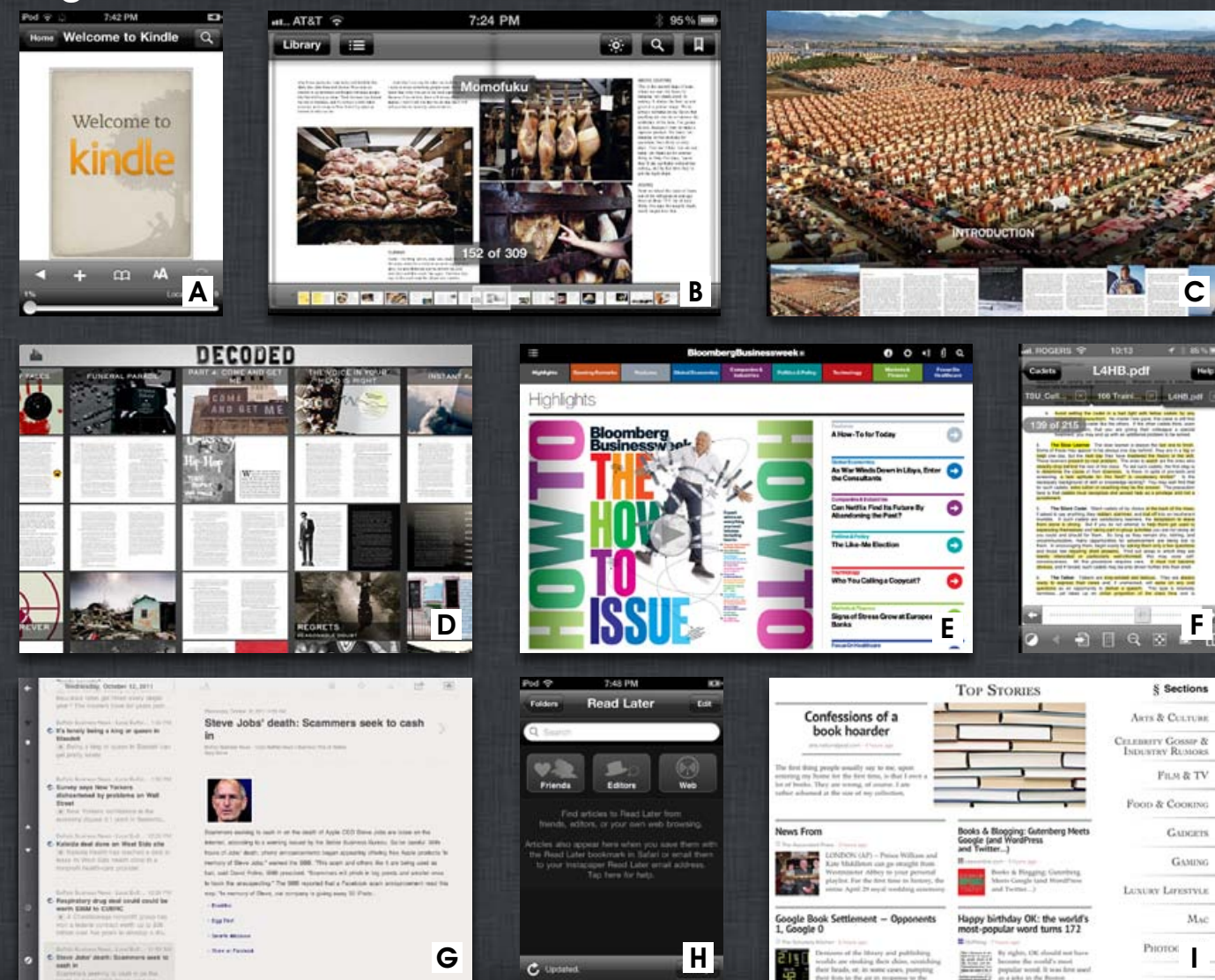
Art + Sound



A. Equally excellent for notes and drawing, Cocoa Box Design's Penultimate (\$2) has been mandatory on our iPads since it was first released. **B.** Based on the computer app, Ambient Design's ArtRage (\$2) is a sophisticated painting program with multiple layers and lots of customization for the numerous tools. **C.** Griffin and Crayola's ColorStudio HD (\$30) lets kids enjoy interactive coloring books with a special mechanized stylus. **D.** With an interface that every band should learn from, Mobile Roadie's The Beatles LOVE (Free) provides clips, news, and user discussions of the awesome Cirque du Soleil show. **E.** Rdio (Free) is one of three streaming music services our editors enjoy; **F.** Slacker's Slacker Radio (Free) and **G.** Spotify (Free) are the others, each offering limited

free access to a huge catalog of music with \$10/month subscription plans. Slacker has a 13-million-song catalog with strong music discovery features like Rdio; Spotify's larger catalog includes desktop Facebook integration. **H.** Oogli's ooTunes Radio (\$5) provides a nice interface for streaming and recording Internet Radio stations. **I.** If you want to control your iTunes library or Apple TV from afar, Apple's Remote (Free) handles it all. **J.** Algoriddim's Djay (\$1/\$20) lets you mix and scratch tracks on spinning turntables. **K.** Apple's GarageBand (\$5) offers an incredible set of manually controlled and auto-playing instruments, plus audio recording. **L.** Ambiance (\$3) by Urban Apps lets you relax to your choice of over 1,000 ambient sounds, downloaded for free as needed.

Digital Publications



Ever since the iPad's release, book, magazine, and other iOS reading apps have improved a lot. **A.** Amazon's Kindle (Free) now offers nearly 1 million books that can be read across all of Apple's devices, as well as Amazon's and other hardware. **B.** Apple's iBooks (Free) is Kindle's chief rival, doing a much better job with color books and PDFs, but lacking a computer app and offering a smaller 200,000-book catalog. **C.** Push Pop Press's Al Gore - Our Choice (\$5) is one of 2011's two most impressive standalone book apps, focused on the environment and complete with an amazing user interface. **D.** Random House's Decoded by Jay-Z (\$15) is the other one, going beyond the print book of the same name with videos, interactive lyric explanations, and universal iOS readability.

E. By digital magazine standards, Bloomberg Businessweek+ (Free/\$3) is the best we've seen, bringing the smart content of the printed version into a well-organized interface, then adding audio and video clips where possible. **F.** Good.iWare's GoodReader (\$5) goes beyond the typical PDF reader with a ton of different features - annotation, web archive support, file transfers, and much more. **G.** Sold in separate iPad/iPhone versions, Reeder (\$3-\$5) is otherwise a great RSS feed manager with an ultra-streamlined interface. **H.** Marco Arment's Instapaper (\$5) stores web pages for later, easier reading with iPhone/iPad screen optimizations. **I.** Acquired by CNN, Zite (Free) creates a newspaper-like reading experience from multiple sources, tailored to your needs.

Edutainment



A. Teaching numbers and counting, Bambino Avenue's *Dano Pirate & The Numbers* (\$3/\$4) features great cartoon art and rewards for correct answers. **B.** Bellamon Avenue's *Shape-O ABC's* (\$2) lets kids assemble puzzles while learning how to spell words, with especially nice audio. **C.** Callaway Digital Arts' *Miss Spider's Bedtime Story* (\$5) is one of two charming titles in the David Kirk series; the apps feature beautiful art, animations, multiple activities, and nice voice work. **D.** Common Extract's *ABC for Little Scientist* (\$1) is a clone of Pi'lkea St.'s cute *Interactive Alphabet*, but with science-themed screens for each alphabet letter. **E.** Shape Minds & Moving Images' *Pete & The Secret of Flying* (\$1-\$2) is a charmingly animated book with a "yes, you can do it!" theme that will resonate

with young kids. **F.** Superb kids' app developer Duck Duck Moose has had a ton of great iOS edutainment apps; *Word Wagon* (\$2) is a newer release focused on teaching letters and spelling for simple words. **G-H.** Ideal Binary has released a couple of really impressive 3-D pop-up books, *Grimm's Little Red Riding Hood* (\$4) and *Grimm's Rapunzel* (\$4), which tell the classic fairy tales with full voice narration, including interactive sequences that let kids play through the stories' most famous scenes. **I.** Fun for kids - unless you're worried about what they might do with real scissors - *Toca Boca's Toca Hair Salon* (\$2) lets you groom the hair of animals and people, complete with neat animations for moving whiskers as they're blown dry and snipped.

Edutainment, Continued



A. Nosy Crow's *Cinderella* (\$3) is the second impressive title from this British developer, which infused this classic fairy tale and *The Three Little Pigs* with extra humor, tons of interactive elements, and fantastic animated artwork. **B.** As part of a growing family of ABC-teaching apps, Peapod Labs' *ABC Food* (\$2) uses edibles to teach letters and words; other titles instead use sports, animals, and music. **C.** GDIplus's *iWriteWords* (\$3) continues to be one of our most-used kids' apps, teaching writing of letters, short words, and numbers with a great interface. **D.** BabyPlayFace's *Baby Play Face* (Free) uses an animated 3-D baby's head to teach early words, including parts of the face and facial expressions. **E.** Darren Murtha Design's *Drawing Pad* (\$2) continues to be the

best painting app we've seen for kids, with tons of different tools, stickers, and backgrounds. **F.** We loved Jack and Joe (\$2), Stupid Art Company's story of a boy and his Siberian Husky puppy, complete with narration, interactive dog-petting, and funny modern life sequences. **G.** Mindshapes' *Hickory Dickory Dock* (\$3) uses a clock interface to give kids aged 3 and older exposure to telling time, and fun activities with an on-screen mouse. **H.** Monster Costume's *Bartleby's Book of Buttons Vol. 2* (\$4) is the second title in a series of button-pressing and switch-flipping stories, best enjoyed with a parent. **I.** Last year's Kids App of the Year was Pi'lkea St.'s *Interactive Alphabet - ABC Flash Cards* (\$3), which uses animated, interactive images to teach young kids their ABCs.

Photo + Video

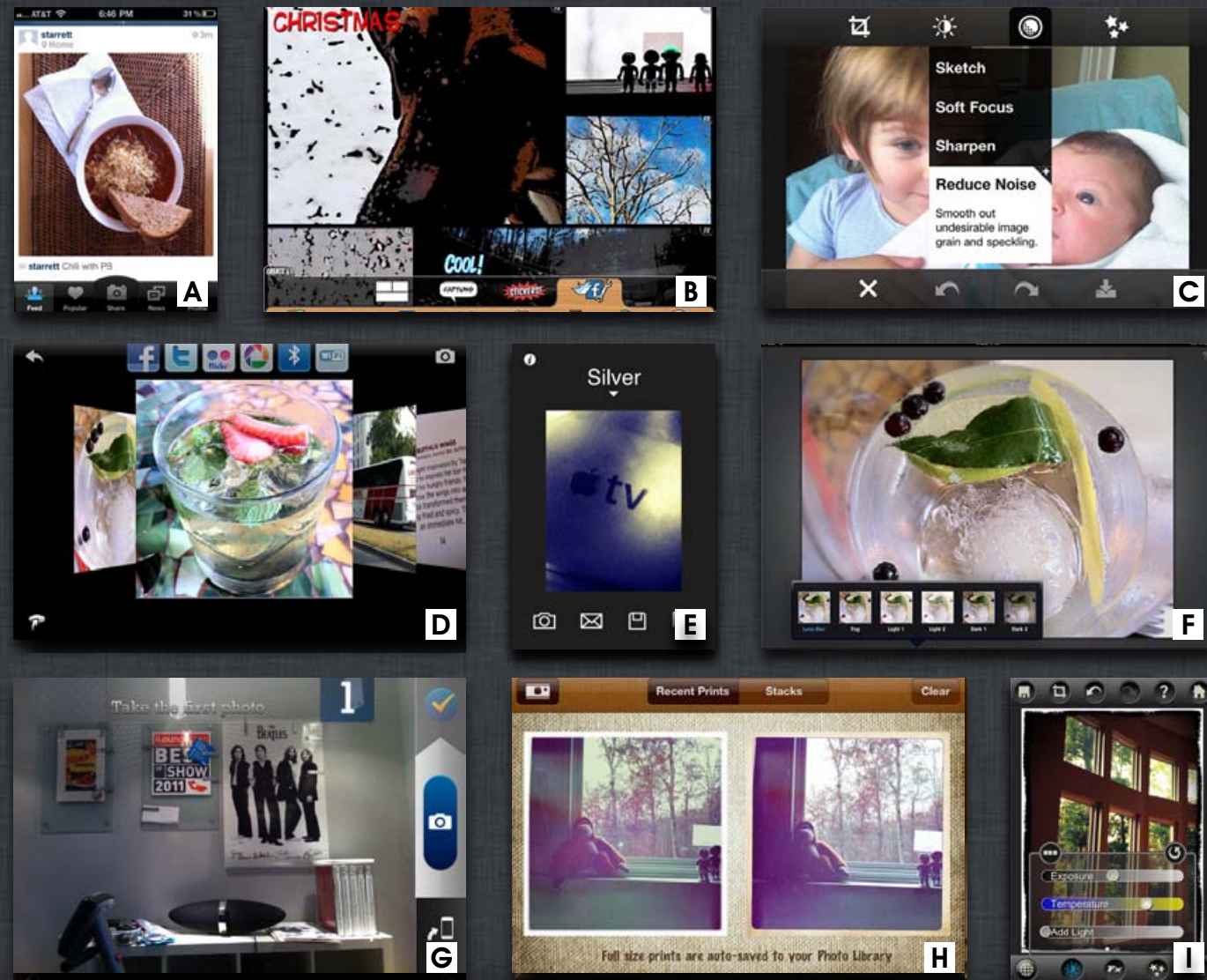


Photo and video apps have become insanely popular over the past couple of years - no surprise because Apple's cameras and video playback capabilities keep getting better, and more ubiquitous. **A.** Burbn's popular Instagram (**Free**) includes photo browsing, online sharing, and framing/blurring/color-shifting tools. **B.** 3DTopo's Comic Book (\$2) transforms photos into halftone-dotted images, complete with comic-style word bubbles, ready to share. **C.** Adobe Photoshop Express (**Free**) lets you clean up and crop shots taken with the less impressive iPad, iPod touch, and earlier iPhone cameras. **D.** You can simultaneously upload images or videos to Facebook, Twitter, and other services with minimal effort using iApps24's Pro-Share (\$2). **E.** NeverCenter's CameraBag (\$2) is

a filtering tool that makes your iOS device's photos appear to have come from classic analog cameras. **F.** Nik Software's Snapseed (\$5) offers sophisticated editing and filtering tools with a really nice interface. **G.** Pano (\$2) by Debacle Software automatically cues multiple portrait or landscape panoramic shots, helps you align them, then stitches them together in high-res glory. **H.** Synthetic Corp's Hipstamatic (\$2) is similar to Instagram and CameraBag, but with a greater emphasis on selling vintage lens and filter sets to create classic effects. **I.** East Coast Pixels' Phototoaster (\$2) offers a suite of photo editing tools with non-destructive editing capabilities, including the addition of textures, borders, and color-shifting filters to photos, all in a universal iOS interface.

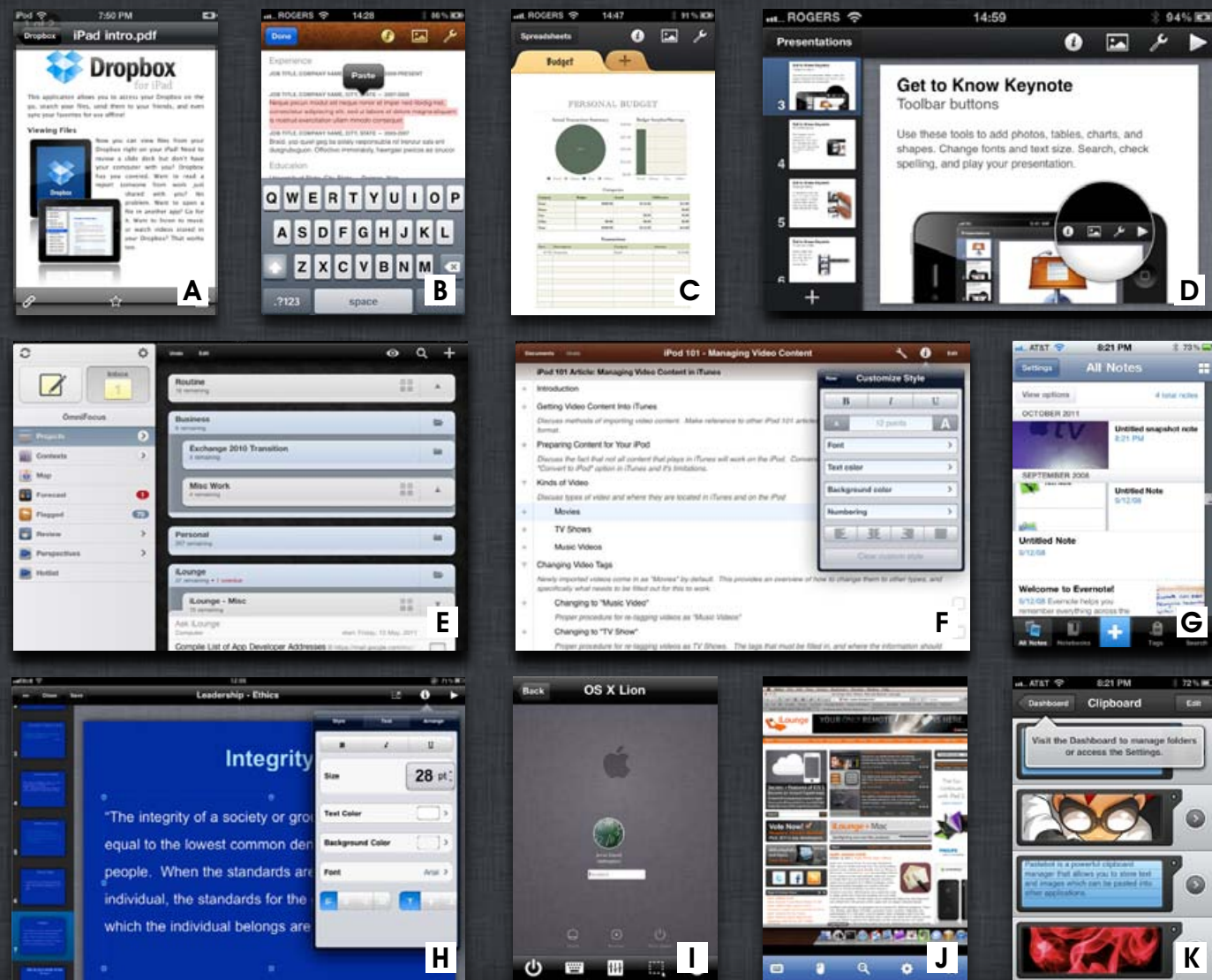
Photo + Video



A. Daemgen.net's ProCamera (\$3) was an early iPhone camera app, and has evolved to include tons of editing, EXIF, and anti-shake features that you needn't have an iPhone 4S to enjoy. **B.** Pocketbooth (\$1) by Project Box snaps and saves photo booth-style sheets of snapshots. **C.** Art & Mobile's TiltShift Generator (\$1/\$3) lets you apply Japanese-style blur and contrast effects to make pictures look stylized. **D.** Flare (\$2) by Greenlike performs realtime processing of video footage to create high dynamic range-like saturation effects. **E.** Apptopus's CollabraCam (\$6) enables iOS devices to work together to shoot videos, with one device serving as a director for up to four camera operators. **F.** Motion Pictures (**Free**) by Cosmonaut Software lets you create time-lapse videos by snapping

individual photos at your preferred interval; a \$2 purchase removes ads. **G.** Darren Murtha Design's Unnecessary Censorship (\$2) lets you turn video clips into jokes by adding bleeps and mosaic blurs to even innocuous movies. **H.** As the father of all iOS video editing apps, Apple's iMovie (\$5) provides simple titling, transitioning, and trimming tools to let you create cool little movies on the go. Some of the best apps we've seen for watching videos are PBS (**I**, **Free**), which streams free Public Broadcasting Service shows, HBO Go (**J**, **Free**), delivering Home Box Office's backcatalog on demand to HBO subscribers, and Netflix (**K**, **Free**), now streaming a fantastic collection of TV shows and movies to iOS devices and Apple TVs for an \$8/month subscription fee.

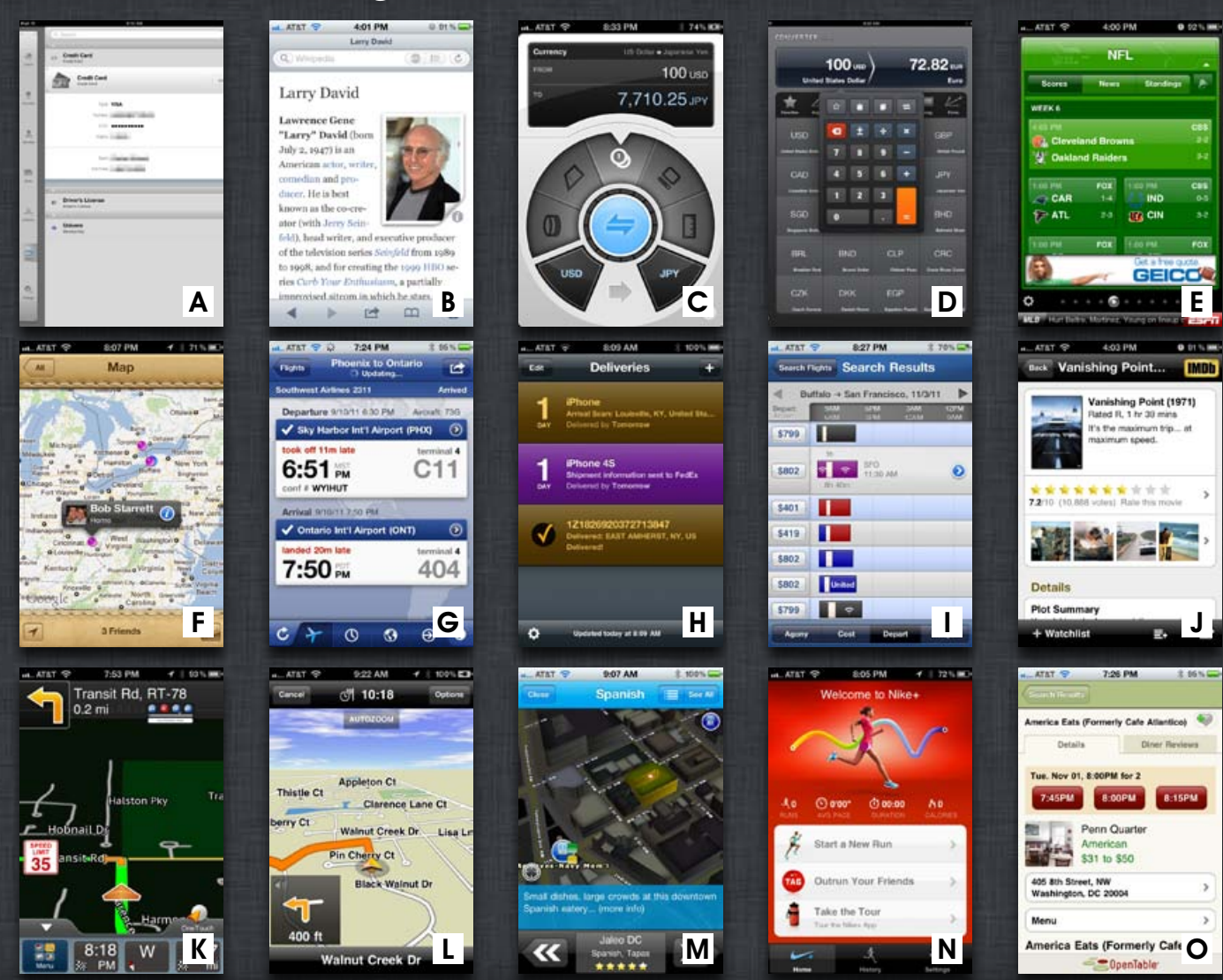
Productivity



Need to work from your iOS device? Developers moved the iPad and iPhone/iPod touch considerably forward in 2011. **A.** Dropbox (Free) provides a unified iOS/computer/web storage space so that anyone can store, share, and access files online. Apple's word processor Pages (**B**, \$10), spreadsheet app Numbers (**C**, \$10), and PowerPoint-like presentation tool Keynote (**D**, \$10) were pretty good on the iPad; now each has an iPhone-optimized version and support for iCloud document syncing. **E-F.** The Omni Group's OmniFocus (\$20/\$40) and OmniOutliner (\$20) respectively offer business-class task management and outline creation tools for iPad users; OmniFocus is also sold for the iPhone/iPod touch. **G.** Evernote (Free) remains an awesome tool for gathering text,

photo, and voice notes in one place, complete with Internet access to everything you've recorded or stored in the app. **H.** Byte Squared's Office² (Free-\$8) gives iOS users opening and editing access to Microsoft Word, Excel, and PowerPoint documents, with separate iPhone/iPad interfaces. **I.** Parallels Mobile (\$5) is a companion app for the Mac-based Windows emulator, letting users access their Mac and Windows desktops on iPhones or iPads. **J.** LogMeIn Ignition (\$30) is more expensive for iOS, but offers full Mac or PC desktop access without the need for Parallels or another paid app. **K.** If all you need is to transfer text or images from your Mac to your iOS device, Tapbots' Pastebot (\$4) instantly copies both between platforms for immediate access.

Reference + Navigation



A. If you've ever forgotten a password or credit card number, Agilebits' secure, multi-device-syncing 1Password (\$8-\$12) is the ultimate solution. **B.** Sophistication's Articles (\$3-5) provides a superior iOS interface for Wikipedia. **C-D.** Convertbot (\$2) from Tapbots and HandyPadSoft's Converter Touch HD (\$2) offer the best iPhone and iPad UIs we've tried for unit and currency conversions. **E.** ESPN ScoreCenter (Free) comes in separate versions to bring immediate sports scores and news to iPhones and iPads. **F.** Apple's Find My Friends (Free) lets families and friends easily share their current GPS locations, either with or without privacy limitations. **G.** Mobiata's awesome FlightTrack Pro (\$10) is our go-to app when flying or awaiting flights, with notifications and

frequent change updates. **H.** Delivery Status Touch (\$5) from Junecloud tracks multiple packages easily, and syncs between iOS + Mac devices. **I.** Hipmunk Flight Search (Free) lets you quickly shop for flights, using smart comparative criteria. **J.** IMDb (Free) lets you get great details about the movies and TV shows you're watching. **K-L.** The frequently-updated Magellan RoadMate (\$50) and iOS universal Navigon MobileNavigator (\$60) both are useful turn-by-turn GPS navigation tools, each with advantages. **M.** UpNext 3D Cities (Free) offers 3-D POI and street maps of 8 major U.S. cities. **N.** Nike+ GPS (\$2) uses GPS rather than the Nike + iPod Sport Kit to track and inspire your runs. **O.** OpenTable (Free) helps you make quick online reservations at over 15,000 restaurants.

Shopping + Fun



A



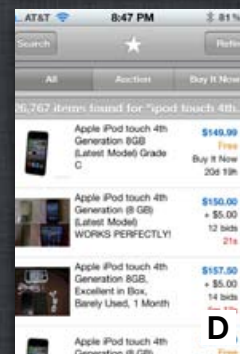
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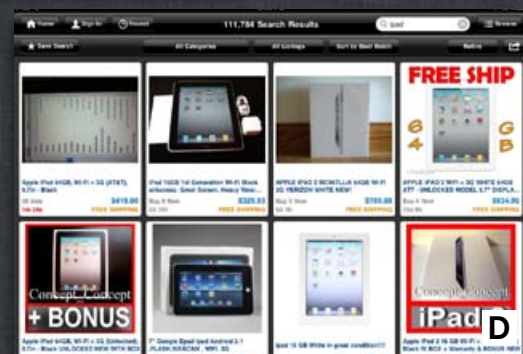
B



C



D



D



E



F



G

Looking to spend or make money with your iOS device? There are hundreds of different ways to do either; we've gathered some of the most noteworthy ones here. **A.** Greeting and announcement card fans will love Apple's Cards (**Free**), which lets you create custom cards directly from an iPhone or iPod touch, then mail them for a total cost of \$3 each - cheaper and less effort than going to the store. **B.** Amazon Mobile (**Free**) provides quick searching, browsing, and even camera-based object recognition for the world's best online store. **C.** Escargot Studios' Craigslist Pro/+Craigslist+ (**\$1**) offers a better interface for buying and selling items through the free Craigslist service than the official web site, in separate iPhone/iPad versions. **D.** eBay (**Free**) also has separate

but nice apps optimized to let you browse the leading source of online auctions. **E.** With or without the company's free Reader, Square (**Free**) turns your iOS device into a digital credit card and payment processor, placing proceeds from your transactions in an easy-to-access online account. **F.** Japanese clothing retailer Uniqlo's wonderful Uniqlo Calendar (**Free**) isn't just a beautiful desktop calendar; it offers eight free and beautiful packages of music and tilt-shift videos shot in Japan. **G.** Hyperbolic Magnetism's Midnight HD (**\$2**) has been a favorite since it first appeared for the iPad, demonstrating both the 3-D particle-generating capabilities of Apple's tablets, and how up to ten-finger multitouch capabilities can change the fireworks-like explosions on the screen.

Social Networking



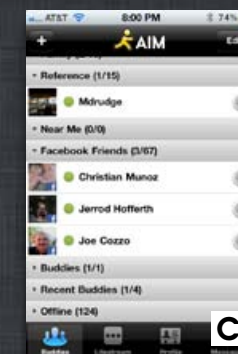
A



A



B



C



D



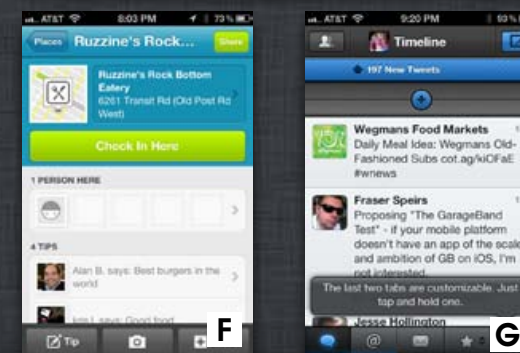
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E



F



G



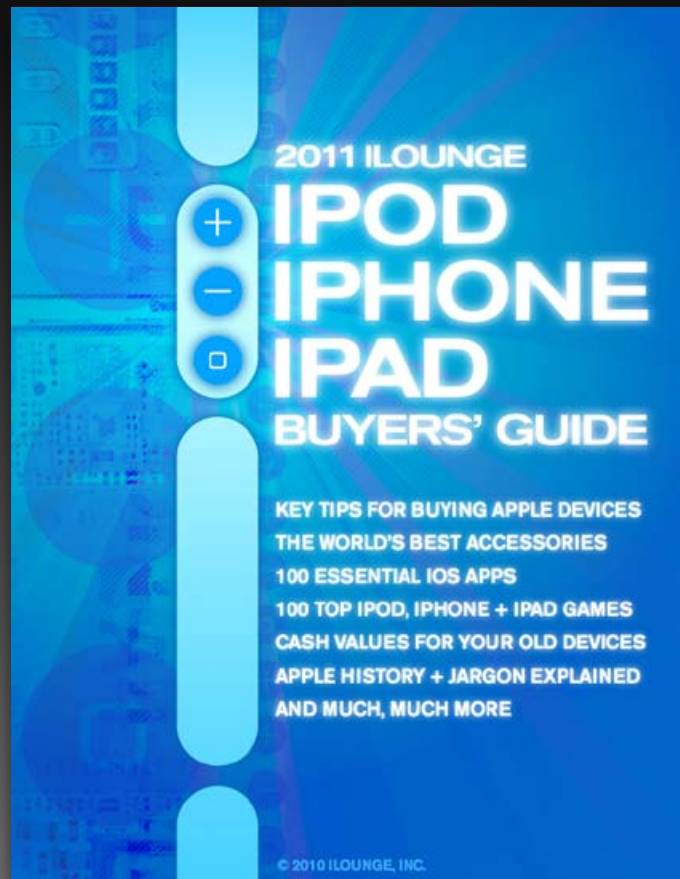
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H

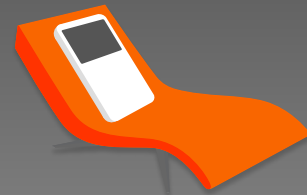
Communicating with family, friends, and colleagues became much better in 2011 thanks to broader support for FaceTime cameras across all of Apple's devices. **A.** Skype (**Free**) now works on iPads, iPhones, and iPod touches, offering free voice and video calling to other Skype-running computers and devices, plus paid calling to traditional telephones. **B.** We've fallen in love with Voxilate's HeyTell (**Free**), which lets you send instant "push to talk" style voice messages to your contacts over 3G or Wi-Fi, reducing the need to make phone calls. **C.** Traditional instant messaging has lately taken a backseat to iOS 5 iMessaging and texting, but AOL's AIM (**Free**) is the app most of us rely upon when we need quick access to friends using iChat and AOL's network. **D.** After an extended,

nearly two-year delay, leading social network Facebook (**Free**) finally released its official iPad app, integrated into version 4 of its iPod/iPhone app, complete with photo sharing, paned access to your pages, and full chat integration. **E.** Fring (**Free**) also released an iPad update to its prior iPod/iPhone app, bringing simultaneous four-person free video chatting to its calling and IM client. **F.** Location-tracking service Foursquare (**Free**) upped the ante by adding Radar, a feature to let you know about cool things taking place around you. **G.** Tapbots' Tweetbot (**\$3**) for iPod/iPhone is still our favorite Twitter reading client, but **H.** Twitter (**Free**) offers a good no-cost experience with separate interfaces for the iPod/iPhone and iPad, now complete with iOS 5 integration for easier posting and sharing.

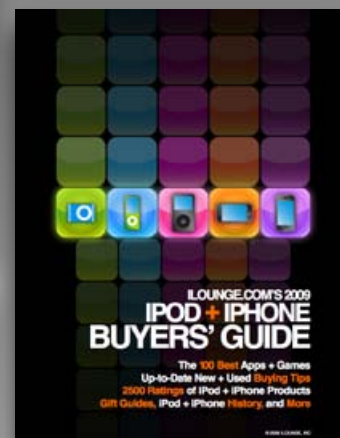
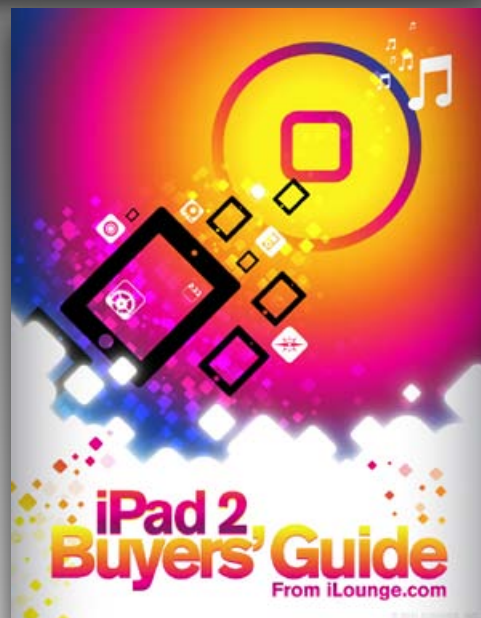


Have an older iPod, iPhone, or iPad? Need help finding its best accessories and apps?

Visit the iLounge Library: Top picks from 2004-2011!



iLounge.com



iLounge: "It's one of the nicest-looking iPod and iPhone batteries yet released"

Gum Plus™

The high-capacity, high-style backup battery

Made for iPod iPhone



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just|mobile®



O!care

Plug & play wireless smart IP camera



treasure your treasure

iCare Available on the App Store



iPad, iPhone, iPod touch not included

OZAKI ozakiverse.com

2011

Best of the Year Awards

2011


**BEST
OF THE
YEAR
AWARDS**

Judged from November 1 through October 31, our Best of the Year awards recognize the products and developers that most improved the way users enjoy their iPods, iPhones, and iPads. In addition to iLounge's editorial selections, based on hands-on testing of products released over the last 12 months, our Readers' Choice Awards tallied thousands of reader votes for the year's best Apple device, as well as top third-party accessory, application, and game developers. Congratulations to all of the winners and runners up!

iPod nano Case of the Year



LunaTik LunaTik

Now sold in silver, red, black, and camouflage versions (\$80-\$100), this beautiful and protective watch band kit integrates beautifully with the sixth-generation iPod nano. By combining silicone rubber, stainless steel and aluminum so deftly together, it's built to last and looks better than any rival.

Runners Up

Hex
Vision Metal
\$70

LunaTik
TikTok
\$40

iPod touch Case of the Year



Scosche kickBack t4

Pound for pound, Scosche's \$30 case for the fourth-generation iPod touch was amongst the best designs we saw all year for any Apple device. kickBack t4 demonstrates how to properly add a thin but stable video stand to a combined hard plastic and rubber shell, protecting all but small bits of the iPod's body.

Runners Up

Incipio
NGP Matte
\$25

Speck
CandyShell
\$35

2012 BUYERS' GUIDE

BEST OF THE YEAR AWARDS

Top Apple Product of 2011 - Readers' Choice



iPad 2

Given the choice between the iPad 2, iPhone 4S, iOS 5, and iCloud, our readers voted decisively to pick Apple's second-generation tablet (\$499-\$829), which brought faster processors, twin cameras, and a slimmer, lighter body. Runners Up: iOS 5 (Free) and iPhone 4S (\$199-\$399).

iPhone Case of the Year



Speck CandyShell Flip

Two years after the original CandyShell won this award, the \$35 CandyShell Flip for iPhone 4 beat all rivals to take our top honor. Highly protective, attractive, and compatible with virtually every accessory thanks to a bottom flap, this hard plastic and rubber case exemplifies great design and versatility.

Runners Up

iBattz Mojo
Battery Case
\$80

Magpul Executive
Field Case
\$10

iPad Case of the Year



Speck CandyShell Wrap

Two 2011 Awards for CandyShells? Yes. The beautifully contoured, excellently protective rubber and plastic \$55 iPad 2 case is great on its own; then there's the easily detached Smart Cover-style lid, and perfectly tailored accessory ports. It's the only case that works well no matter how you use your iPad.

Runners Up

Gumdrop Cases
Drop Series Case
\$60

Otterbox
Reflex for iPad 2
\$70

Top Apple Product of 2011 - Editors' Choice



iOS 5.0

After actively debating this award, our editors agreed that iOS 5's notifications, PC-free setup, reminders, and other features had made tens of millions of Apple devices hugely better; Siri on iPhone 4S offers a taste of the future. Runners Up: iPad 2 (\$499-\$829) + iPhone 4S (\$199-\$399).

Docking Speaker of the Year



iHome iA63

Innovation was modest this year in the docking speaker category, but iHome's iA63 combined a handsome industrial design with a rotating iPod/iPhone dock, an alarm clock radio, and support for the company's apps; it's a very nice little bedside stereo for \$100.

Runners Up

Altec Lansing	JBL
Octiv 650	On Beat
\$200	\$150

Wireless Speaker of the Year



Logitech Wireless Boombox

AirPlay speakers were the talk of 2011, but this powerful little Bluetooth speaker blew them all away - and it wasn't hard. Logitech kept the great eight-driver array from last year's awesome S715i, added wireless capabilities, and kept the \$150 price. Smart.

Runners Up

Soundfreq Sound	Uniden
Step Recharge	BTS200
\$160	\$120

Headphone of the Year



Bowers & Wilkins C5 In-Ear Headphones

Bringing B&W's design savvy and sonics to a more affordable price point, C5 won us over with comfortable, cool-looking ear stabilizers, great sound, and an integrated three-button remote/mic. A wonderful option. Runners Up: Jays A-Jays Four (\$70) + JH Audio JH16 Pro (\$1,149).

Deluxe Speaker of the Year



Bowers & Wilkins Zeppelin Air

As one of several key 2011 products to pack new technology into a familiar housing at a prior price, Zeppelin Air adds AirPlay support and higher-fi audio decoding hardware to the large, powerful drivers and iPod/iPhone dock found in earlier Zeppelins. It's worth \$600.

Runners Up

Geneva Lab	Monster
Model M	Beatbox
\$650	\$450

Car Accessory of the Year



SuperTooth SuperTooth HD

Just when we thought visor-mounted Bluetooth speakerphones had stalled out, this easy-to-use \$129 model redefined "premium" features with strong audio quality and Siri-like voice controls that work even without an iPhone 4S. A very nice advance.

Runners Up

Blueant	Scosche
S4	freqOut
\$100	\$60

iOS Game Developer of the Year - Readers' Choice



Rovio Mobile

Best known for the insanely popular Angry Birds, Rovio ran away with reader votes this year on the strength of the movie tie-in followup Angry Birds Rio, and its numerous updates to the holiday-themed Angry Birds Seasons. Runners Up: Gameloft and Electronic Arts.

iPad App of the Year



Apple GarageBand

How many apps are useful for pros and fun for kids, beautiful on the surface and yet deep enough to revisit on a weekly basis? Apple's \$5 GarageBand has the same name as the Mac iLife app, but its amazing instruments - played through touch or automation - and sampler take the iPad version to new heights.

Runners Up

- | | |
|----------------------------|-------------------------------------|
| Algoriddim
Djay
\$20 | Push Pop Press
Our Choice
\$5 |
|----------------------------|-------------------------------------|

iPad Game of the Year



Epic Games Infinity Blade

From the moment it debuted, Epic's \$6 Infinity Blade redefined what iPads and smaller iOS devices were capable of, bringing eye-popping art and moody 3-D audio to the fighting and questing genre. Subsequent updates made the universal title even better and deeper; it is as close to an A+ as any iPad game has come.

Runners Up

- | | |
|------------------------------------|-------------------------------------|
| Gameloft
Modern Combat 3
\$7 | Godzilab
iBlast Moki 2 HD
\$5 |
|------------------------------------|-------------------------------------|

iOS Game Developer of the Year - Editors' Choice



Gameloft

For the second time in several years, leading developer Gameloft won over our editors by bringing console-quality gaming to iOS devices. Action, shooting, racing, RPGs, and strategy - it does every genre better every year. Runners Up: Electronic Arts and Epic Games.

iPod/iPhone Game of the Year



Gameloft Shadow Guardian

As Sony, Nintendo, and Microsoft won't play in the App Store, Gameloft has created parallel franchises to their console hits. This \$7 cousin to Sony's Uncharted series has all of the 3-D platforming, story, and shooting of a PlayStation title. The Retina art, audio, and controls use iPods and iPhones brilliantly.

Runners Up

- | | |
|-----------------------------|-------------------------------|
| EA Sports
NBA Jam
\$1 | Id Software
Rage HD
\$2 |
|-----------------------------|-------------------------------|

iPod/iPhone App of the Year



Apple Find My Friends

Facebook, fourSquare, and others have all tried to create services around locating people, but this free app makes it super easy to share location info with friends and family, or to look it up as needed - a super practical use of GPS. Better yet, it works with Siri: just ask where someone is, and the map appears.

Runners Up

- | | |
|-----------------------------------|----------------------------|
| Marco Arment
Instapaper
\$5 | Tapbots
Tweetbot
\$3 |
|-----------------------------------|----------------------------|

iOS Application Developer of the Year - Editors' and Readers' Choice



Apple

As if the iPad's genre-defining music app GarageBand wasn't enough, Apple's Find My Friends brought permission-based location sharing to the iOS masses, and updated versions of iMovie, Pages, Numbers, and Keynote wowed both us and our readers. Runners Up: Adobe and Skype.

iPad Kids' App of the Year



Nosy Crow Cinderella

While Nosy Crow's animated interactive fairy tale app Three Little Pigs made a very strong first impression, the developer's \$6 rendition of Cinderella - complete with reflective mirrors that use FaceTime cameras to bring you into the action - reached all new heights in reinventing childrens' apps for Apple's tablets.

Runners Up

Bambino Avenue
Dano Pirate HD
\$4

Peapod Labs
ABC Food
\$2

iPod/iPhone Kids' App of the Year



Ideal Binary Grimm's Rapunzel

With universal iOS support, Ideal Binary's \$4 take on the classic Brothers Grimm story Rapunzel lets kids actually participate in the action, from being raised as a baby to being saved from the witch's tower - all with full narration, sound effects, and beautiful cartoony graphics that pop out of the screen.

Runners Up

Duck Duck Moose
Word Wagon
\$2

Toca Boca
Toca Hair Salon
\$1

Accessory Maker of the Year - Editors' Choice



Bowers & Wilkins

After years of making some of the best-looking iPod and iPhone audio gear around, Bowers & Wilkins stepped up further in 2011, delivering the wonderful C5 earphones and becoming the first company to sell an AirPlay wireless speaker. Runners Up: LunaTik and Speck Products.

Accessory Maker of the Year - Readers' Choice



LunaTik

This creator of smart iPod nano watch bands was spun off from Scott Wilson's MINIMAL, the design studio behind Uncommon cases, great Nike watches, Microsoft's slim Xbox 360, and Kinect. We can't wait to see what's next. Runners Up: Griffin Technology and Speck Products.

Accessory of the Year



Apple Apple TV

Thanks to impressive post-release software updates, Apple's \$99 video rental device evolved into 2011's most essential iOS accessory, adding AirPlay, screen mirroring, and other great features. Runners Up: Bowers & Wilkins C5 (\$180) + Logitech Wireless Boombox (\$150).

iPads, iPhones, and iPods
Around the World
Photo Galleries

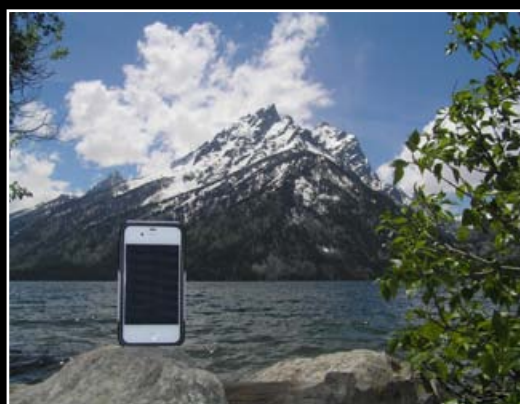
If there's any big theme connecting our latest favorite reader-submitted Around the World pictures, it's how Apple's devices have become cameras. Here are our favorite recent images.



Top: Empire State of Mind
New York City, USA



Left: iPhone Climbing Pyramids
Teotihuacan, Mexico



Lower Right: Grand Teton Mountains
Wyoming, USA

Upper Right: Many Sleepless Nights
USA



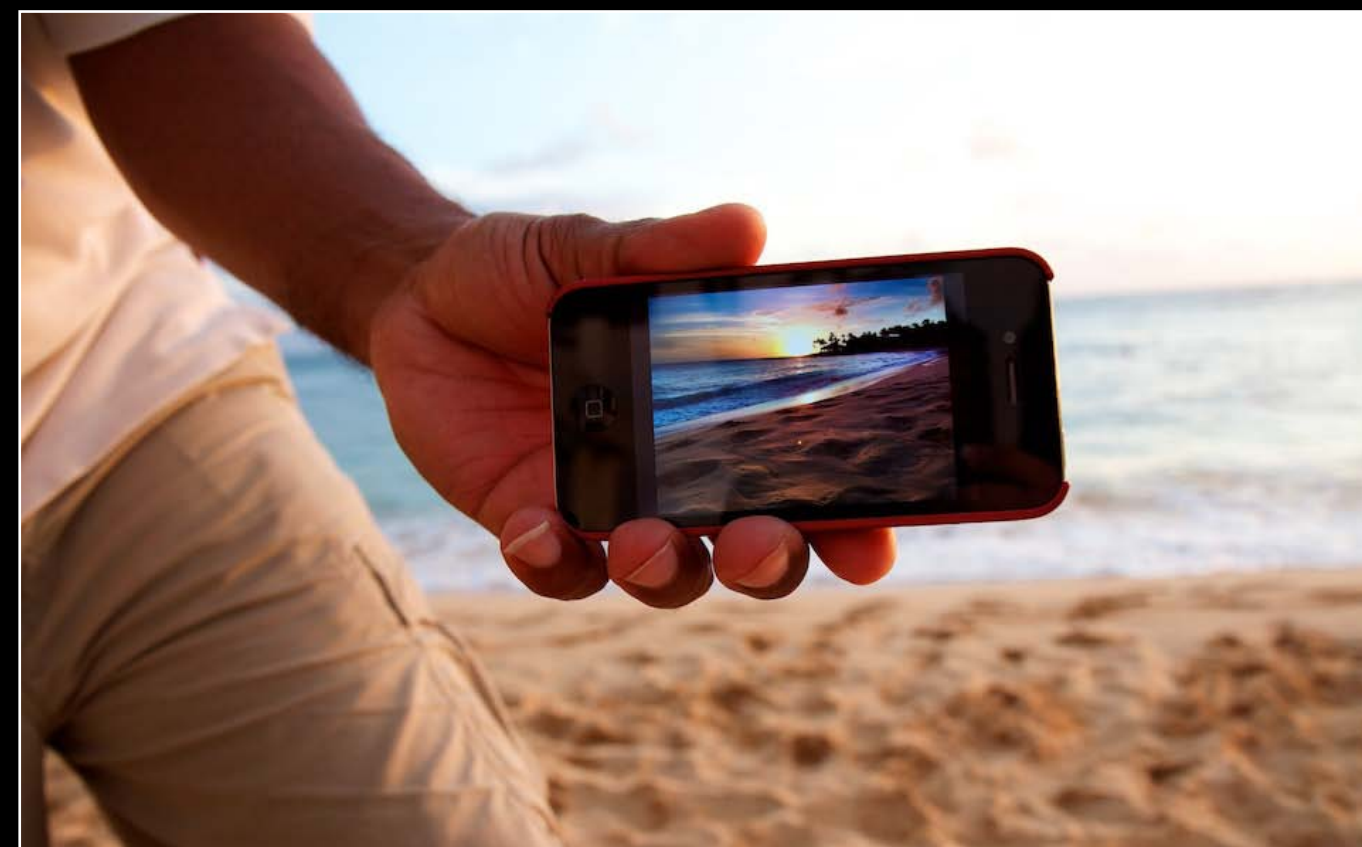
Above: Facetime On Honeymoon
Grand Cayman, Cayman Islands



Upper Left: iPhone At World Series
Texas, USA

Lower Left: iPhone at Miraflores Lock
Panama Canal, Panama

Below: iPhone Shooting Kauai
Hawaii, USA





Clockwise From Top Left:

- iPad On A Yak**
Mongolia, China
- iPhone at Temple of Apollo**
Delphi, Greece
- iPhone at Brighton Beach**
Brighton, Australia
- iPhone Charging By Tree**
Bozcaada, Turkey
- iPhone 4 in Hong Kong**
Hong Kong, China

Clockwise From Top:

- The Mirror iPhone**
Papua, New Guinea
- iPhone at the Great Wall**
Great Wall, China
- iPhone Snapping Todai-ji Temple**
Nara, Japan
- iPhone at Taglang La**
Ladakh, India



iHistory 2001-2011

2012 BUYERS' GUIDE

2012 BUYERS' GUIDE

ihistory

Ten years ago, Apple changed the world forever with the launch of the iPod and iTunes, portable- and Mac-based music players that would later evolve into much more, spawning some of the world's most popular digital stores and portable computers. Our timeline looks at the key moments in iPod, iTunes, iPhone, Apple TV, and iPad history.

2001

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9

iTunes 1.0 Released

- Apple buys Casady & Greene's SoundJam MP
- Reworks it to become iTunes 1.0, which:
- Turns/rips audio CDs into smaller files,
- Organizes music libraries,
- Plays Internet radio, and
- Runs on Macs. No PC version is planned.



23 2 10 31

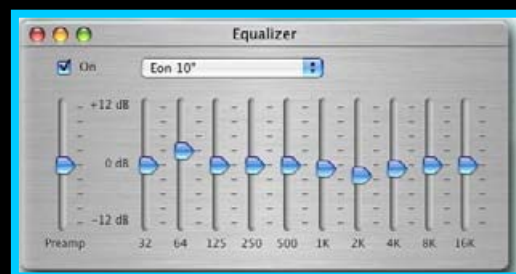
iPod (5GB) Unexpectedly Announced

- Will sell for \$399 when released,
- Is pocket-sized, with a 1.8" hard disk inside,
- Holds 1,000 songs in its 5-Gigabyte capacity,
- Uses a scroll wheel controller + bright screen,
- Works only on Macs, and
- Took only six months to develop.



iTunes 2.0 Released

- iPod support,
- ID3 and metadata support,
- MP3 CD burning, and
- Sound controls such as an equalizer and crossfading.
- Still Mac-only.



The First iPod Ships

125,000 iPods Sold

2002

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

20

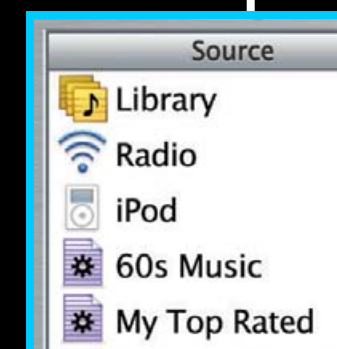
10GB iPod Is Out

- \$499.
- Same design.
- Displays contacts.
- Still Mac-only.
- Iffy PC software.

17

iTunes 3.0 Released

- Supports Audible audio books,
- Song ratings,
- Smart playlists, and
- Playlist import/export.
- Still Mac-only.



Second-Generation iPod Is Out

- New \$499 20GB model.
- 5GB now \$299, 10GB now \$399.
- PC-friendly, using MusicMatch software.
- Old moving Scroll Wheel now capacitive touch.



Big Box Retailers Go iPod

- Best Buy, Target + Dell
- all sell iPods, sometimes cheap
- Competitors such as Creative try to squeeze 2.5" hard disks into enclosures more like the iPod's.



iPod Limited Edition

- New "limited edition iPods" feature engraved signatures or logos for \$49 each
- Madonna, Tony Hawk, Beck, or No Doubt
- Most expensive iPods now sell for \$548.



595,000 iPods Sold

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2003

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Microsoft's Plan

- Announces Media2Go.
- Audio/video player.
- Deemed "iPod killer."
- Renamed Portable Media Center for 2004 release, where it flops.

iTunes 4.0 Released

- AAC audio, DVD burning, album art, library sharing.
- New store offers 99c/track, \$9.99/album, 200,000 songs.
- 1 million songs sold week 1.
- iTunes and iTunes Music Store are both still Mac-only.

**Third-Gen iPod Is Out**

- Thinner, Smaller.
- Bottom Dock Connector.
- Touch Wheel + buttons.
- 10GB/\$299, 15GB/\$399, 30GB/\$499.
- All support Macs + PCs.
- But Firewire only.

**iPod Goes USB**

- New USB 2.0 cables and drivers
- PC users finally have easy way to connect iPod

**Third-Gen iPod Updated**

- Only 4 months after release
- 20GB/\$399, 40GB (10,000 songs)/\$499.
- 10GB stays at \$299, earlier models discounted

**iPod Adds Recording, iTunes 4.1 Released**

- Belkin + Apple release first voice recorder + digital photo reader for new iPod.
- iTunes adds PC support, iTunes Music Store for PC; MusicMatch phased out.

2,046,000 iPods Sold

2004

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iPod mini Debuts

- \$249, 4GB capacity.
- Comes in 5 colors.
- Anodized aluminum.
- New Click Wheel.
- Critics call Apple crazy.
- 15GB \$299 iPod debuts.

**iPod+hp Shown**

- Promised for mid-year release.
- Blue iPod shown, but never came out.

**iPod mini Ships, Sells Out**

- Despite critics, long lines form.
- Immediately popular with women and girls.
- Shortages delay international release until July 2004.

iTunes 4.5 + 3M iPods

- Apple Lossless for Macs/PCs, WMA conversion for PCs.
- 3Mth iPod sold only 4 months after 2Mth, critics begin to attack iPod's competitors as cheap, poor designs.

**iTunes 4.6 + EU iTunes**

- iTunes added for AirPort Express wireless access to iTunes music.
- France, Germany, U.K. get iTunes Music Stores, sell 800k songs in first week.

iTunes Music Store: 100 Million Songs Sold**Motorola + Apple / Real's Harmony**

- Motorola promises iTunes-compatible next-gen phones, without specifics.
- RealNetworks releases Harmony so Real RMA songs can play on iPods; Apple implies a lawsuit.

iPod 4G Debuts

- \$299 (20GB), \$399 (40GB) models borrow Click Wheel from iPod nano.
- Thinner bodies, fewer pack-ins.



2004

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iTMS Music Catalog Hits 1M**Apple Thinks Video**

- Begins search for wireless, video experts to join iPod division.

iPod+hp Ships

- Hewlett-Packard ships "Apple iPod from HP," a repackaged iPod 4G with new manuals and HP's tech support.
- HP also announces iPod-compatible printer - never shipped - and "printable tattoo" stickers to cover iPod bodies.

**Microsoft Talks**

- Attacks iPod at Portable Media Center launch.
- Claims iPod unsafe, iPod buyers are music thieves.

**iPod, iTunes Rule**

- 4M songs now downloaded from iTunes per week.
- ~6M iPods sold, now 80%+ of U.S. digital music players.

iPod Photo, U2 iPod Debut

- Apple debuts color-screened iPod 4G called iPod Photo.
- \$499 (40GB), \$599 (60GB) models.
- "P" in photo is later decapitalized, matching mini, other models.
- Also releases the iPod U2 Special Edition (\$349), black-bodied B&W-screened iPod 4G, signed by the four members of rock band U2.

**iTunes 4.7**

- Adds photo syncing support for the iPod Photo, and duplicate song search.

Sony Goes MP3

- After failing with ATRAC-based iPod rivals, Sony announces MP3-ready Walkman, plots with Warner to take away iPod's lead in digital music.

10,309,000 iPods Sold

2005

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iPod Shuffle Debuts

- \$99 (512MB) or \$149 (1GB).
- Flash-based.
- No screen or Wheel; button controls.
- In 4 months, Apple has 58% of flash player market.

**#1 Brand: Apple**

- U2 Silhouette ad is named smartest ad campaign by Business 2.0.
- By month's end, Apple named the top global brand in survey of ad pros.

**iPod Price Drops**

- Apple kills 40GB iPod and 40GB iPod photo.
- New iPod photos: \$349 (30GB), \$449 (60GB).
- \$29 Camera Connector introduced, allows photo transfers to iPod photo without iTunes.

**shuffle Knocked Off, Battery Suit Settled**

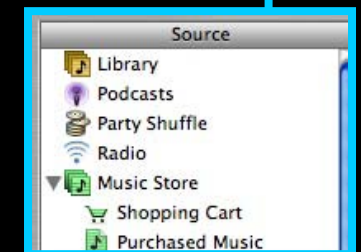
- Clones of the iPod shuffle appear in Taiwan.
- Apple settles a massive class action lawsuit over iPod battery defects.

**"iPods" Go Color**

- Color "iPods" replace "iPod photos" at \$299 (20GB) + \$399 (60GB).
- Apple also drops the price of the 1GB iPod shuffle to \$129.

iTunes 4.9, Podcasts

- New iTunes adds free downloads of radio-like audio "podcasts" to the iTunes music store, plus iPod-ready playback.

**Bush Gets iPod**

- Following Queen Elizabeth II's purchase of an iPod, U.S. President George W. Bush receives one as a gift.

2005

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HP Ends iPod Sales

- After firing CEO, HP abruptly stops iPod sales.
- Claims repackaging iPods didn't fit future plans.
- Retailers sell off HP-badged iPods, some released only weeks earlier.

Apple Can't Patent UI

- Failing in its attempt to patent the iPod's UI, Apple finds itself threatened by Creative, which successfully patented a key aspect of library nav.

mini Killed, nano and ROKR Debut

- iPod mini, "the most popular iPod", killed without warning.
- Replacement iPod nano is ultra-thin, small color iPod.
- \$199 (2GB), \$249 (4GB), sold in black or white bodies.
- Special edition engraved Harry Potter iPod announced.
- Apple and Motorola unveil first iTunes phone, ROKR E1, billed as an iPod shuffle in a cell phone; immediately reviled.

iTunes 5.0

- Adds staff reviews of music, streamlined look, easier search features, and preference menu changes.

iPod (with video)

- iPod 5G debuts, billed as music player "with video as a bonus."
- \$299 (30GB), \$399 (60GB), black or white bodies.
- 2.5", 320x240 screen, enough battery for 2-3 hours of video.

iTunes 6.0

- Adds videos to the iTunes Music Store.
- Five TV shows, 2,000 music videos: \$1.99 each.
- Videos are 320x240, formatted for iPod's display.
- By month's end, 1 million videos sold.
- Gifting and reader reviews also added.

42M iPods, shuffles Sold Out

- Apple announces huge iPod sales, and that shuffles are sold out through year's end.
- NBC videos come to the iTunes Music Store.

Creative, Microsoft, MTV

- Creative launches iPod-clone called Zen Vision: M
- Microsoft and MTV work to duplicate iTunes with URGE music service

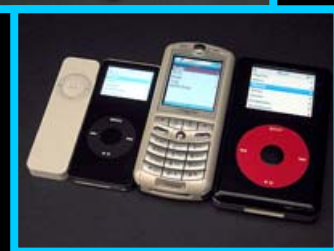
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iPod + FM Radio

- Apple intros the iPod Radio Remote.
- Adds FM to iPods and nanos.

Sandisk Now #2

- Memory chip maker surprisingly becomes #2 U.S. MP3 player vendor.
- Distant second to Apple.

1GB iPod nano, Cheaper shuffles

- \$149 (1GB) nano intro'd via press release.
- iPod shuffles now \$69 (512MB), \$99 (1GB).

1B iTunes Songs

- 1 billionth song sold to Alex Ostrovsky, who wins iMac, 10 60GB iPods, \$10,000 iTunes credit + name on a Julliard Music School scholarship.

1,000,000,000

To every iTunes Music Store customer, thanks a billion.
1 billion songs have been legally downloaded from the iTunes Music Store.

iPod Accessory Day

- Apple unveils iPod Hi-Fi, a \$349 "audiophile" speaker system, and \$99 leather iPod cases.
- Many users are shocked by the prices and skeptical of the value.

**iTunes Season Pass**

- TV shows and sports can now be purchased on discount in advance, with future parts downloading automatically.

PortalPlayer Out, Samsung In iPods

- Longtime iPod chipmaker dumped for Samsung, iPod memory vendor.

Creative vs. Apple

- Creative and Apple sue each other over iPod UI patent violations.

Nike + iPod

- The Nike + iPod Sport Kit is announced.
- \$29 iPod nano add-on, lets runners track their progress and hear voice prompts
- 450,000 sold in 90 days.

New U2 iPod

- A video-ready version of the U2 iPod debuts, bundled a U2 video download.



2006

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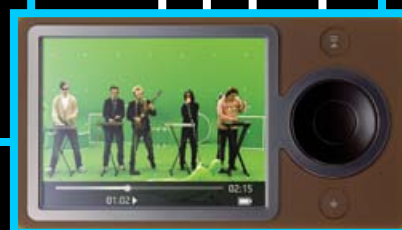
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Chinese Trouble

- iPod maker Foxconn exposed for labor issues.
- CEO oddly tells shareholders that Apple is working on a "none-touch" iPod.

Microsoft's Zune

- Having failed to beat Apple earlier, Microsoft plans iPod and iTunes clones for late 2006.

**Bye, Dell + Napster**

- iPod and iTunes competitors falter.
- Dell quietly withdraws from MP3 player market.
- Napster publicly mulls a sale.

U.S. Carmakers Back In-Car iPod

- Ford, GM, Mazda 2007 models will have iPod-ready stereos.
- By year's end, over 70% of cars sold in U.S. are iPod-ready.

Apple + Creative

- Lawsuit settled; Creative becomes iPod add-on maker, receives \$100M from Apple with caveats about future patent licenses.

"Made For Sansa"

- Sandisk launches accessory program with iPod add-on developers.

iPod 5.5G, nano 2G, shuffle 2G Debut, iTV Shown

- Apple debuts iPods with brighter video screens (\$249/30GB, \$349/80GB).
- New metal nanos: 5 colors, good battery (\$149/2GB, \$199/4GB, \$249/8GB).
- New radically smaller metal-bodied iPod shuffle (\$79/1GB)
- Offers advance look at iTV: device wirelessly streams videos, music to TVs.

iTunes 7.0; Movies & Games

- \$4.99 iPod games, \$9.99-\$14.99 640x480 movies in renamed iTunes Store.
- iTunes adds Cover Flow browsing mode, gapless audio playback.

Product (RED) iPod nano

- Special edition red iPod nano debuts; \$10 of the \$199 nano fights AIDS in Africa.

88,701,000 iPods Sold

2007

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iPhone, Apple TV Feted

- Apple shows "revolutionary" iPhone.
- Combines a cell phone, Internet communicator, and widescreen iPod.
- \$499 (4GB), \$599 (8GB) plus 2-year AT&T contract.
- 480x320, 3.5" touchscreen,
- Launch planned for June.
- iTV renamed Apple TV, set for February with 40GB hard drive.

**iPod shuffle colors**

- Apple adds green, blue, pink, and orange shuffles to the lineup.

Jobs Fights DRM

- CEO posts open letter on Apple's website.
- Says Apple will sell DRM-free music if labels will supply it.
- Refuses to license Apple's DRM.

Cisco + Apple

- iPhone trademark fight resolved; name shared.

iTunes 7.1

- Support for streaming and syncing media to Apple TV.
- Adds full-screen Cover Flow, confusing sorting options.

Apple TV Ships

- Delayed a month, the "DVD player for the 21st Century" ships.
- Requires extended- or high-definition TV, separate video cables.
- Only plays videos purchased or converted through iTunes.

**100M iPods Sold**

- Apple breaks the 100 million sales mark for the iPod family.

iTunes 7.2, DRM-Free

- Apple adds \$1.29 iTunes Plus downloads to the iTunes Store.
- DRM-free, bitrate doubled to 256Kbps, old tracks can be upgraded for 30 cents each.
- Only certain labels support iTunes Plus format.

2007

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Apple TV Updates

- Now deemed only a "hobby" by Steve Jobs.
- Gets a \$399 (160GB) version, YouTube browser.

iPhone Dominates Media, Launches

- After utterly dominating news for a month, iPhone launches to lines across U.S.
- Apple sells 270,000 units in first weekend, but doesn't sell out in many locations.
- AT&T activation problems dog the otherwise happy event, but are mostly resolved in two weeks.

iTunes 7.3, #3 in U.S., 3B Songs

- New iTunes adds iPhone activation support.
- iTunes Store becomes the #3 vendor of music in the U.S., surpassing Amazon.com.
- Store quietly sells 3 billionth song.

NBC Ends iTunes Deal

- Shocking TV fans, NBC opts not to renew its iTunes agreement.
- Apple blames greed, and refuses to carry the network's Fall lineup.

iPod nano, classic, touch Debut, New iPod shuffle Colors, iPhone Price Cut

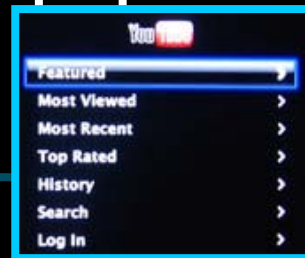
- Apple introduces a video nano (\$149/4GB, \$199/8GB)
- Renames iPod to "iPod classic" (\$249/80GB, \$349/160GB).
- Introduces widescreen, flash-based iPod touch (\$299/8GB, \$399/16GB).
- iPhone's price radically cut by \$200, and the 4GB version is killed off.
- Four muted iPod shuffle colors replace January's, including new purple.

iPhone Mea Culpa, iTunes 7.4

- iTunes 7.4 adds 99-cent ringtone creator for iPhone, plus new iTunes Wi-Fi Music Store for iPod touch and iPhone.
- Steve Jobs apologizes for shocking iPhone price cut, offering \$100 Apple Store credit.

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iPhone Dev Center opens, SDK?

- Apple says it will release a software development kit for the iPhone in February 2008, then opens a site to help devs create custom "web apps."

119,265,000 iPods sold

- The number, tallying total iPod family sales for six years, doesn't include 1,389,000 total iPhones sold through September 2007.

iPhone Hits UK, Germany, France

- Following September and October announcements, O2 (UK) and T-Mobile (Germany) become exclusive service providers on November 9, with France's Orange joining on the 29th.
- Sales are respectable, but not fantastic.
- By December, O2's CEO is already talking about a "3G iPhone" for 2008.

Carmack Criticizes iGaming Strategy

- Following numerous complaints from developers skeptical of Apple's still-cloudy plans for iPhone software, famed Doom and Quake developer John Carmack describes Apple's closed game development strategy for iPods as "horrible."
- Notes that he personally told Steve Jobs not to repeat the mistakes with iPhone gaming, but isn't optimistic.

Apple Fights iPhone Unlockers

- Despite software updates from Apple, hackers continue to succeed in "cat and mouse game" of unlocking iPhones for sale overseas, "jailbreaking" them to run unauthorized applications.
- Apple threatens overseas importers with legal penalties of up to \$1,000 per phone sold.

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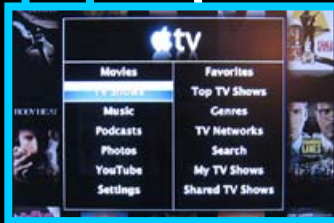
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iPhone, iPod touch, Apple TV Software Updated with Major New Features

- iPhone + iPod touch get 1.1.3 software: custom home screens and location finding ability for maps.
- iPod touch owners offered previously iPhone-only apps such as Mail for \$20.
- Apple TV 2.0 software is shown, adding support for iTunes purchasing and movie rentals. Released 2/12.
- Hardware drops to \$229 (40GB), \$329 (160GB).



iTunes 7.6: Movie Rentals + Copies

- Following months of leaks, Apple + all six major studios unveil U.S. movie rental service for iTunes.
- \$2.99-\$4.99 based on movie's age + DVD-/HD-quality.
- iTunes Digital Copy lets buyers of certain Fox movies get iTunes-ready, DRM-protected version.

Apple Adds Pink 8GB nano

- Lighter pink 8GB iPod nano released as sixth "Spring" color, Valentine's Day gift for standard \$199 price.



141.265M iPods, 3.7M iPhones Sold

- Apple's strongest quarter adds 22.1 million iPods, 2.3 million iPhones to totals.
- Reports suggest up to 1/3 of iPhones are purchased to be unlocked; Apple cites strong global interest.

16GB iPhones, 32GB touch Added

- Apple debuts higher capacity devices via press release.
- \$499 for 16GB iPhone or 32GB iPod touch.
- touch sells in Europe at a slightly lower price than iPhone.

iPod shuffle 1GB Price Drops, 2GB Debuts

- 1GB shuffle drops to \$49, 2GB added for \$69, both in same five colors. Higher capacity ships in early March.



iTunes Store #2 Music Retailer in U.S.

- iTunes now trails only Wal-Mart in music sales.
- Apple attacks developers of Hymn Project, software to strip DRM off of iTunes purchases.

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Apple Holds iPhone SDK Event

- Instead of the SDK in February, Apple releases free beta kit and \$99 developer program for select U.S. applicants.
- All software will be distributed through iTunes, starting in June, requiring iPhone/iPod touch 2.0 software.
- Developers offer praise and concern; 100,000 downloads in four days.
- Eight days later, Apple sends out mass rejection letters, blaming high demand.



Ireland, Austria Get iPhone, Supplies Low

- O2, T-Mobile expand iPhone sales to more countries.
- Stock of 16GB iPhones dries up.

Apple Buys Chipmaker P.A. Semi

- Apple buys maker of low-power CPUs.
- Explains chips are for future iPods, iPhones.

iTunes Store #1 Music Retailer; AT&T Hints 3G iPhone "In Months"

- iTunes now top U.S. seller of music, over Walmart.
- iPhone stock scarce, AT&T hints 3G phone soon.

152M iPods, 5.4M iPhones Sold

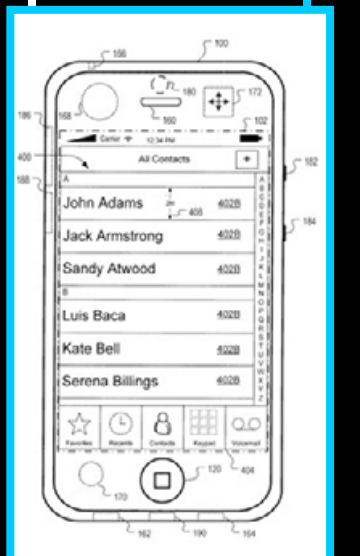
- Quarter reflects slowing sales growth.

Apple Welcomes International Developers

- Comes two months after U.S. developers allowed in iPhone SDK program.

iPhone Patented

- A 371-page filing attempts to cover the entire UI.



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iPhone 3G, 2.0 Software Finally Dated

- Apple sets July 11 release for iPhone 3G.
- \$199 (8GB), \$299 (16GB).
- Faster, plastic-bodied, GPS-enabled.
- Seventy countries, inc. Japan + Australia, to get iPhone.
- 2.0 software and App Store to launch at same time.
- Expensive rate plans anger many potential buyers.

iTunes Store Sells 5 Billion Songs

- Music catalog now 8 million tracks
- Also claims to be the most popular online movie store.

iTunes 7.7, App Store, Apple TV 2.1

- Adds the App Store, with 500 applications. 25% are free.
- Apple TV now lets iPhones, iPod touches serve as remotes.

iPhone 3G Bows

- Weekend of worldwide launches starts in Australia and New Zealand.
- Lines form; activation, call drop, and software issues anger buyers.
- Regardless, Apple sells 1 million units in three days.

163M iPods, 6.1M iPhones Sold**New classic, touch, nano Released**

- Fourth-generation nano repacks 3G model in nine tall, colorful shells.
- \$149 (8GB), \$199 (16GB).
- iPod touch 2G gets speaker, volume buttons, and Nike + iPod support.
- \$229 (8GB), \$299 (16GB), \$399 (32GB).
- Two iPod classics replaced by single \$249/120GB model.
- Four iPod shuffle colors are updated to brighter tones.

iTunes 8: HD TV Shows + Genius

- HD TV show downloads, including NBC programs.
- Genius feature finds music similar to a selected song.
- Also adds photo-heavy Grid library view, new visualizer.

4GB iPod nanos appear

- Without warning, new 4GB iPod nanos appear in Europe.
- Suggests that Apple decided late on the top 16GB capacity.

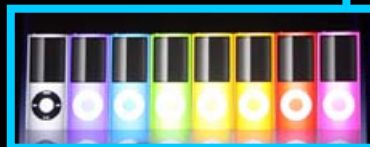
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174M iPods, 13M iPhones Sold

- iPhone sales beat predictions, due to 30,000 selling locations worldwide.

Fadell Out, Papermaster In

- "The Father of the iPod," the man who pitched the device to Apple, is abruptly replaced by Mark Papermaster as VP of iPod/iPhone Engineering.
- Fadell quietly leaves Apple in March 2010.

**Apple TV 2.1, iPhone OS 2.2 Released**

- Apple TV update adds 3rd party remote control support.
- Lets the device stream audio to other Apple wireless devices.
- iPhone OS 2.2 provides iPhone-only support for Google Street View and public transport directions
- Also adds direct-to-device podcast downloads.

**In-Ear Headphones with Remote + Mic Ship**

- Months after adding wired three-button remote and microphone support to late 2008 iPods, Apple ships a \$79 pair of canalphones as the first remote and mic accessory.

**Apple Pushes iPhone As Gaming Device; Developer Complaints Grow**

- As Apple begins to push the iPhone as a viable and growing gaming platform, developers take to the Internet to complain about lengthy delays and amateurish Apple review processes.
- Titles are rejected for unclear, often specious reasons.
- The complaints will continue through 2009.

2009

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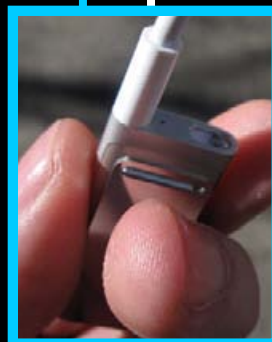
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iTunes To Go DRM-Free, \$0.69-\$1.29

- At Apple's last appearance at Macworld Expo, only one iTunes announcement.
- In April, Apple will drop DRM and let songs sell for \$0.69 (rarely), \$0.99, or \$1.29.

New iPhone Model Leaks From UAE

- Rumors of new iPhone model in June start as the iPhone 3G goes on sale in U.A.E.
- Corroborated in March by spy shots that show a new but similar-looking iPhone body shell.

**iPod shuffle 3G Out**

- Apple quietly unveils all-new iPod shuffle via press release.
- \$79 (4GB).
- No integrated playback or volume controls; requires Apple remote-equipped headphones and new VoiceOver feature.

Apple Previews iPhone OS 3.0

- Beta for iPhone and iPod touch adds cut, copy, and paste, push notifications, Spotlight search, Voice Memos, third-party accessory support, stereo Bluetooth, tethering capabilities.
- "Summer" release.
- Video recording, autofocus camera, and compass features are found hidden inside.

1 Billion Apps Downloaded, Problems Persist

- 9 months after launch, the App Store celebrates billionth app download.
- 13-year-old Connor Mulcahey wins \$10,000 iTunes card, 17" MacBook Pro, 32GB iPod touch, and a Time Capsule.
- Hours earlier, Apple was forced to apologize for allowing a baby shaking app, one of many deemed offensive or problematic by App Store visitors.

iPhone 3GS, iPhone OS 3.0

- Apple reveals "50% faster" iPhone 3GS, with almost identical body to iPhone 3G.
- \$199 (16GB), \$299 (32GB). 8GB iPhone 3G kept around at new \$99 price.
- Adds 3-Megapixel still camera, 640x480 video recording, compass, and faster chips.
- iPhone OS 3.0 ships right before iPhone 3GS's June 19 release date.



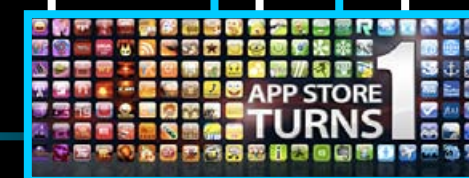
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App Store Hits 50,000 Apps

- On its first birthday, App Store has 100 times as many titles as when it launched.

**Google Voice Rejected; FCC Steps In**

- Apple refuses to approve a Google app that offers free SMS and cheap long distance calling.
- FCC later investigates Apple and AT&T.

New iPod nano, shuffle, classic, touch

- nano now includes widescreen display, camera, pedometer, FM radio, and polished aluminum body.
- \$149 (8GB), \$179 (16GB).
- New iPod touch boosts speed 2x, gets Voice Control, and accessibility features; lacks camera due to supply issue.
- \$299 (32GB), \$399 (64GB). Prior 8GB priced at \$199.
- \$249 classic bumped to 160GB, no other changes.
- Four new shuffle colors debut, including \$59 2GB models and a \$99 4GB stainless steel special edition.
- By October, 228M iPods, 33M iPhones have been sold.

**iPhone OS 3.1, iTunes 9 Ship**

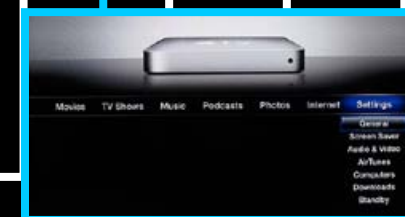
- iPhone OS adds support for new iPod touch, minor Bluetooth, video editing, and other bug fixes.
- iTunes 9 gains CD- and DVD-emulating iTunes LP and iTunes Extras features, app organization, new iTunes Store design, and wireless Home Sharing of media.

Apple TV: 160GB, \$229

- 40GB Apple TV discontinued, price dropped on larger model.

Apple TV 3.0 Software Debuts

- Includes a new main screen for Apple TV, new Internet Radio streaming.

**App Store Hits 100,000 Apps****Google Grabs AdMob From Apple**

- Google buys leading phone ad company, deepening antagonism with Apple.

Apple Buys Lala

- Rumors of a web-based iTunes swirl; Apple buys and shuts Lala, supposedly for use in iTunes.

Apple + Nokia Cross-Sue Over Patents

2010

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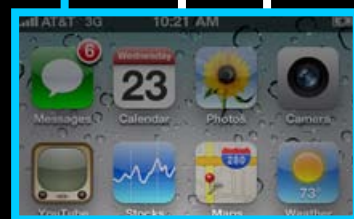
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iPhone 4 Debuts, iPhone OS Renamed

- Confirming prototype leaks, iPhone 4 is announced at Worldwide Developers Conference.
- New 960x640 "Retina Display," FaceTime video calling, new front VGA and rear 5-MP cameras.
- Unit's black or white glass body and metal frame/antenna are praised on stage by Steve Jobs.
- iPhone OS renamed iOS.
- 5 billion apps sold from catalog of 225,000.
- iPhone 4 pre-orders start one week later, crash Apple's and AT&T's websites.

**iOS 4, iPhone 4 Released, iPad at 3M**

- iOS 4 launches day before iPhone 4.
- Runs fine on 2009 models; problems on older ones.
- iPhone 4 arrives in black; white model missing.
- Apple announces 3M iPads sold, offers iOS iMovie.

**"Antennagate" Begins**

- Some early iPhone 4 users find that their cell signals die when holding the device normally.
- Apple downplays the issue for days before getting slammed by Consumer Reports, sued by users.

1.7M iPhone 4s Sold First Weekend

- Despite antenna issues, iPhone 4 is Apple's fastest selling product.

Antennagate Continues

- Apple concedes antenna strength is reduced when device is held.
- Software patch reduces the "normal" number of bars.
- At press event, Jobs claims that all smartphones have the same problem, but offers free cases for the next two months, no-questions returns.

Mysterious Touchscreens Appear

- Tiny Apple-branded touchscreens appear, suggest shuffle-sized iPod touch.
- Weeks later, iPod-touch sized screen is found with front-facing camera.

269M iPods, 59M iPhones Sold**White iPhone 4 Delayed, Free Cases**

- Apple unveils iPhone 4 Case Program app, offering each buyer one free case from a small selection.
- White iPhone 4 delayed again.

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Papermaster Out As iPhone, iPod Chief

- Reportedly blamed for iPhone 4-related problems, Mark Papermaster is fired.

iPod shuffle, nano, touch Replaced, New Apple TV + iTunes 10 Debut

- Fourth-gen shuffle has built-in buttons: \$29 (2GB).
- New nano is audio only, with a clip and the leaked touchscreen: \$149 (8GB), \$179 (16GB).
- Thinner fourth-gen iPod touch has twin cameras, Retina Display: \$229 (8GB), \$299 (32GB), \$399 (64GB).
- \$99 plastic, driveless second-gen Apple TV unveiled.
- iTunes 10 adds Ping social network and AirPlay wireless media streaming.

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**279.5M iPods, 73.7M iPhones, 7.46M iPads Sold, 300K App Library****White iPhone 4 Delayed Again To Spring 2011**

- Two days later, white iPhone 4 removed from Apple's online store.

AT&T, Verizon Begin Selling iPad Directly

- AT&T selling Wi-Fi + 3G iPads with data plans.
- Verizon selling Wi-Fi only models with Mi-Fi packages.

Fortune Confirms Early-2011 Verizon iPhone

- CDMA-capable iPhone said to be released early next year.

The Beatles Land On iTunes

- Catalog of digital music holdout finally comes to iTunes in one-year exclusive.
- 450,000 albums sold in the first week.

iOS 4.2 Released for iPad, iPhone, iPod touch; 4.1 for Apple TV

- First iOS release to unite Apple's mobile devices, brings iOS 4 features to iPad.
- Adds AirPlay, AirPrint, other new features.

First Supposed Second-Generation iPad Cases Seen

- Features slimmer design, large speaker opening, and rear camera hole.
- Some sources claim that speaker opening is actually an SD Card slot.

2010

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Ping

A social network for music. Join the conversation.

The Beatles. Now on iTunes.



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Verizon iPhone Parts Appear Online?

- Slightly redesigned iPhone 4 frame shows different black bands, moved switch and buttons.

iPad 2 Body Spotted at iLounge Pavilion

- Accessory developer shows a supposed iPad 2 rear shell, with features that match earlier case leaks.

**Apple Drops iPhone 3GS Price, Restocking Fees**

- iPhone 3GS cut from \$99 to \$49, with 2-year contract.
- All Apple restocking fees eliminated.

Verizon iPhone Finally A Reality

- Apple and Verizon announce launch of CDMA-based iPhone 4 for February 10; same prices as AT&T model.
- \$30 unlimited data at first, to be replaced with tiered options.
- Launches to short lines, but sales are consistently strong.

Apple CEO Steve Jobs Takes Medical Leave of Absence

- For second time in two years, Jobs leaves to focus on health while battling pancreatic cancer.

298M iPods, 89.9M iPhones, 14.79M iPads Sold**10 Billionth App Downloaded**

- Gail Davis's download of Paper Glider rewarded with \$10,000 iTunes card.

News Corp. Launches "The Daily" iPad Newspaper

- Aided by Apple, News Corp. launches daily newspaper app with interactive content.
- Utilizes new "In-App Subscription" billing option from Apple: \$0.99/week, \$40/year.
- Usability, stability, quality of content criticized from early on.

HP Unveils iPad Rival TouchPad

- 9.7"-inch tablet computer runs webOS, acquired during purchase of Palm.
- Physically very similar to the first-generation iPad, but plastic.
- TouchPad and all webOS hardware killed off August 18, weeks after the tablet's release.

The Future of MobileMe

- Apple stops selling boxed versions of its online service for Mac OS, iOS devices.
- Rumors suggest revamped free service with new features, cloud-based "locker" for content.

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The App Store is about to hit ten billion downloads.
Download the ten billionth app and you could win a US \$10,000 iTunes Gift Card.
Visit the App Store »

THE DAILY

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Apple Announces iPad 2

- Matching rumors, iPad 2 to launch March 11.
- New dual-core A5 processor, two cameras, available in black or white, is thinner and lighter than first-generation model, same prices.
- Garageband, iMovie debuted for iPad.
- Launches to long lines, sell outs on March 11.
- 100M iPhones, 15M iPads, 100M iBooks sold.

**iOS 4.3 for iPhone, iPad, iPod touch**

- Improved performance, iPad side-switch options, Personal Hotspot for GSM iPhones, Home Sharing.
- Apple TV 4.2 brings MLB and NBA content, AirPlay for apps and Safari, other new features.

**White iPhone 4 Launches**

- After months of delays, GSM- and CDMA-versions of white iPhone 4 finally launch to short lines.

AT&T Says No Summer Launch For Next iPhone

- Kicks off months of speculation, confusion about new iPhone models.

Apple Announces iOS 5, iCloud, iTunes Match

- WWDC focuses on software; iOS gets revamped notifications, iMessage instant messages, Twitter integration, wireless syncing and over-the-air updating.
- iCloud is new free replacement for MobileMe, with contact, calendar, and mail syncing, redownloads of iTunes-bought content, cloud-based backups, and more.
- iTunes Match a new syncing/downloading service for music whether it was purchased through iTunes or not; \$25/year.

**Jobs Outlines Plans For New "Spaceship" Campus in Cupertino****Apple Begins Offering Unlocked iPhone 4 In The U.S.**

- GSM iPhone 4 can be purchased unlocked; \$649 (16GB), \$749 (32GB).

Bloomberg Reports Specs Of Next-Generation iPhone

- Magazine claims same A5 processor as iPad 2, 8-Megapixel camera.

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15 Billion App Store Downloads

128.89M iPhones, 314.56M iPhones, 28.73M iPads Sold

T-Mobile USA Offers SIMs for iPhone 4

- Despite not carrying the device, T-Mobile offers service to those with unlocked iPhones.
- Later claims over 1M iPhone users on network.

Apple TV Updated, Adds TV Shows to iCloud

- Unexpected software update brings streaming of previously purchased iTunes TV content.

Apple Passes Exxon Mobil In Market Cap

- Apple becomes world's most valuable company.
- The two companies trade positions back and forth for months.

Steve Jobs Resigns

- Hinting at ill health, Apple CEO resigns, named Chairman of Board.
- Chief Operating Officer Tim Cook is named new CEO.

99-Cent TV Show Rentals Pulled From iTunes

- Without explanation, Apple halts TV show episode rentals, one of the second-generation Apple TV's highly promoted features.

Purported iPhone 5 Test Photo Appears Online

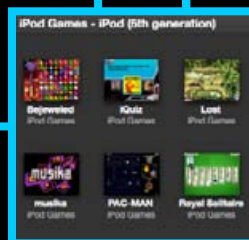
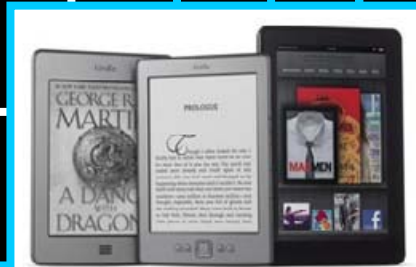
- EXIF data apparently confirms photo was taken on Apple's campus.
- Suggests 3264 x 2448 resolution, 8-Megapixel camera at f/2.4.

Amazon Undercuts Apple With \$79-\$199 Kindle

- Online retailer introduces cheaper dedicated e-readers.
- Also shows off Kindle Fire, a \$199 7" color-screened tablet to launch in November.

Click Wheel Games Disappear from iTunes Store

- Five years after introduction, Click Wheel games are removed from the iTunes Store.
- Believed to suggest iPod classic was on way out after extended period without an update.



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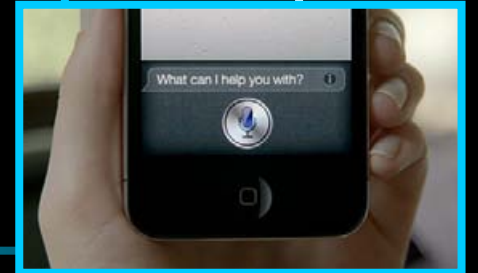
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Apple Unveils iPhone 4S

- After months of rumors, Apple debuts new iPhone 4S.
- \$199 (16GB), \$299 (32GB), \$399 (64GB).
- Same body as iPhone 4, redesigned antenna, A5 processor, 8-Megapixel camera.
- Gets voice-activated Siri personal assistant.
- White iPod touch added, 8GB price drops to \$199.
- iPod nano price now \$129 (8GB), \$149 (16GB), new software changes UI, adds new watch faces.
- AppleCare+ plan replaces standard AppleCare for iPhone, offers coverage for accidental damage.
- Over 300 million iPods sold, 16 billion songs downloaded.

**Former Apple CEO Steve Jobs Dies, Aged 56**

- Passing of Jobs announced on Apple.com, following battle with pancreatic cancer.
- Profound worldwide reaction to loss of "creative genius."
- Apple launches dedicated "Remembering Steve" site, holds memorial event for corporate and retail employees.

**iOS 5, iPhone 4S Released**

- Smooth rollout of iOS 5 ushers in the beginning of PC-free iPad, iPhone, iPod touch ownership.
- iCloud goes live for all users.
- Apple TV adds NHL, WSJ videos, support for Photo Stream, AirPlay screen mirroring.
- Following one million preorders, iPhone 4S goes on sale to lines at Apple Retail Stores and other retailers.
- Over four million devices sold in the first weekend, more than doubling record set by iPhone 4.

145.96 Million iPhones, 321.18 Million iPods, 39.85 Million iPads Sold

The iGlossary.

Every year, the once-simple iPod + iTunes universe becomes bigger and more complicated, as iPhones, iPads, and even Apple's lower-end iPods grow features. We explain all the confusing terminology right here.

AAC: Advanced Audio Coding is a sequel to MP3 audio compression technology. An AAC audio file offers superior sound quality to an MP3 audio file of the same size. All of Apple's iTunes Store audio files are sold in AAC format.

Accelerometer: A feature of some iPods, all iPhones, and all iPads that enables the device to know how much it is being turned on three axes, or shaken.



Accessibility: Apple's collective term for features designed to help disabled users to use its products. See Spoken Menus and VoiceOver.

Airplane Mode: A feature of the iPad, iPhone and iPod touch that turns off all wireless broadcasting and receiving capabilities at once, rendering the device "safe" for use on airplanes.



AirPlay: Once known as AirTunes, the just-updated technology that streams audio (and sometimes video or photos) from an iOS device, old Apple TVs, or an iTunes computer to other Apple devices or third-party accessories.

AirPlay Mirroring: Currently supported only by the iPhone 4S and iPad 2, this feature wirelessly mirrors the contents of the iPhone or iPad screen on any HDTV with a current-generation Apple TV. This lets you watch videos, games, web sites, and other content on a big screen while interacting with them on the touchable screen.

AirPort Express: Introduced in 2004, a brick-like Apple wireless device with an audio-out port. Can serve as a Wi-Fi router or receiver, sharing a broadband connection or merely receiving streamed audio from any computer with iTunes, playing

that audio through attached speakers using AirPlay.

AirPort Extreme: Introduced in 2003, Apple's wireless (Wi-Fi) router, compatible with Macs and PCs.



AirPrint: Apple's wireless printing solution for iOS devices, compatible with specific HP and Canon wireless printers; hacks support other printers attached to computers running specific operating systems.

Aluminosilicate Glass: Used on iPhones, this special glass is more scratch- and chip-resistant than regular glass thanks to chemical strengthening.

Anodized Aluminum: The matte-finished metal used in most iPods and many Macintosh computers.

2012 BUYERS' GUIDE

Anodized Aluminum, Polished: A glossy version of anodized aluminum, debuted by Apple in the late 2009 iPod nano, then changed in 2010 for the iPod nano and iPod shuffle.

Antennagate: The media term for the public relations debacle that followed the discovery that the iPhone 4 suffered from antenna attenuation issues, and Apple's initially flippant response. Also refers to the unusual media event Apple then held to address the issue.

API: Short for "application programming interface," a behind-the-scenes tool to help developers build more powerful apps quickly. Apple touts new iOS releases as containing "over 200 new APIs," suggesting that developers have many new tricks at their disposal.

App (Application): Another word for "piece of software," used by Apple to refer to any downloadable software - including games - available for the iPad, iPhone, and iPod touch. Apple began to use the term for Mac software in late 2010.



App Store: The exclusive distribution point for all Apple-authorized software for the iPad, iPhone, and iPod touch.

Apple: Founded in 1976, a 34-year-old maker of computers and software that in 2001 branched out into music players, 2007 into cellular phones, and 2010 into tablet devices. Maker of iPhones, iPods, iPads, iTunes, and numerous other products.

Apple A4 Chip: Based upon the ARM Cortex-A8, this customized CPU also includes a PowerVR SGX 535 graphics processor, and is found inside the iPad, iPhone 4, iPod touch 4G, and second-generation Apple TV.



Apple A5 Chip: Based upon the ARM Cortex-A9, this dual-core CPU is bundled with a PowerVR SGX 543MP2 processor, together delivering 2-9X the power of Apple's A4 Chip. It's found inside the iPad 2 and iPhone 4S.

Apple Lossless: An Apple-developed audio format that creates sonically perfect copies of CD audio tracks while consuming less space.

THE iGLOSSARY



Apple TV: A media player designed solely to be connected to high-definition television sets for the playback of standard- and high-definition video, stereo and 5.1-channel audio, and photos. The first model was effectively a seriously stripped down Macintosh computer without traditional keyboard, mouse, or monitor support, controllable only with various remote controls, and contained a hard disk. It was followed by a smaller diskless iPod touch-like version that streamed rented, subscription, iTunes, and iOS device content.

Audible: Now owned by Amazon, a leading provider of audiobooks that can be played on iPads, iPods and iPhones.

Audiobook: A spoken version of a printed book, generally separated by chapter markers that can be skipped through like music tracks.

Autocorrect: A feature of the iPad, iPhone, iPod touch, and some software that automatically corrects perceived mistakes in your typing, using a dictionary and your prior key presses to guess what you wanted to type.

Autofocus: The ability of certain cameras to adjust their lenses to focus sharply on objects at different distances. Contrast with "fixed focus," where some close objects become blurry because the lens cannot adjust.



Aux/Auxiliary: Generally refers to a secondary, external source of audio output or input, connected via a standard-sized 3.5mm (headphone port-sized) audio cable. A device with Aux-In can receive and play sound from a connected sound-generating device; a device with Aux-Out can send sound to a connected sound-amplifying device.

A2DP/AVRCP: Refers to two related standards for stereo Bluetooth wireless audio streaming and remote control. A2DP support was added to iOS 3.0, AVRCP to iOS 4.1, enabling some devices to work fully with stereo wireless speakers and their built-in track controls.

Bitrate: The amount of data used per second to store audio or video content, with higher numbers generally meaning

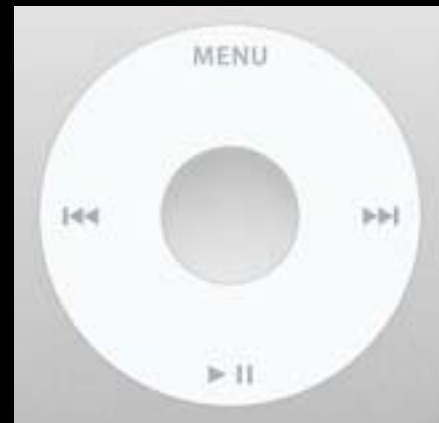
higher-quality audio or video if everything else is held equal. See also Kbps and Mbps.

Bluetooth (Monaural/Stereo): A wireless standard used by all iPads, all iPhones, certain iPod touches, and some accessories to transfer audio and other non-video data from device to device. Monaural Bluetooth is used to let iPhones connect wirelessly with headsets and speakerphones to receive and send telephone audio; Stereo Bluetooth is used by iPads, most iPhones, and most iPod touches to send music to wireless headphones and speakers. Bluetooth can also be used by certain apps to make iPads, iPhones and recent iPod touches synchronize for multi-player gaming. Thus far, only the iPhone 4S includes Bluetooth 4/Bluetooth Smart support - the latest version of the standard - while older iPhone, iPod, and iPad models all use Bluetooth 2.0 or 2.1.

CDMA: Short for Code Division Multiple Access, the wireless technology used by Verizon and Sprint's 3G networks, which rendered them incompatible with early iPhones based on the competing GSM standard. The first CDMA iPhone was the Verizon iPhone 4.

Cellular/Cell: Refers to the specific wireless networks created by phone companies' towers, capable of broadcasting and receiving telephone calls and data from iPhones and

other cellular phones. EDGE, 3G, and 4G towers differ in speed and relative pervasiveness across the world.



Click Wheel: The five-button plus touchable surface circular controller incorporated on most iPods sold until recently, providing scrolling, selection, volume-, and track-changing functionality. Currently used only on the iPod classic.

Cloud: Refers generally to servers on the Internet where data can be remotely stored and wirelessly retrieved regardless of one's geographic location. See iCloud and MobileMe.

Component AV Cable: A cable that uses five "RCA-style" connectors - three video, two stereo audio - to output standard- or high-definition video to a television set.

Composite AV Cable: A cable that uses three analog connectors - one for video, two for stereo audio - to output standard-definition video to a television set.



Cover Flow: A feature of iTunes, all iPhones, iPod classics, and iPod touches that displays album covers in a line, with the currently selected cover in the center and others on angles to its sides. Enables visual, photographic browsing for albums rather than reading a list of text.

Developer (Dev): Refers to anything from a single person to an entire company of people who make products. Third-party developers create products that are dependent on products created by the "first-party," here, Apple.

Digital Compass: Also known as a magnetometer, a sensor that detects the device's orientation relative to the Earth's magnetic poles. Currently found in the iPhone 3GS, 4, and iPads.

Dock Connector: One of two names for Apple's proprietary 30-pin connector, Apple's iPad, iPod, and iPhone plug, found on all models from 2003 to the present except for iPod shuffles. Hides tiny pins for charging, data synchronization, remote control, and audio and video output.

DRM: Digital Rights Management, a technology that locks audio, video, and other files such that they can only be played by one user or a small group of users sharing a single account and password.

Dual-Mode: A phone that is capable of operating either in CDMA or GSM mode as needed. The iPhone 4S does this.

EDGE: Refers primarily to the slow cellular data standard used on GSM networks in the United States and elsewhere prior to the growth of 3G. Relied upon by the original 2007 iPhone, and a fallback for the iPhone 3G, 3GS, 4, and 4S when 3G towers cannot be located nearby, dropping their data speeds.

Exchange: Shorthand for Microsoft Exchange, software offered by Microsoft to help large organizations synchronize their e-mail, calendars, contacts, and tasks. Exchange support was added to the iPhone OS in 2008 to help Apple's devices gain inroads in the Microsoft-dominated corporate market.



FaceTime: Apple's name for video calling on iPhone 4/4S,

iPad 2, iPod touch 4G, and Macs, as well as future devices that support two-person calls with H.264 video and AAC audio compression.

FairPlay: Apple's DRM scheme for iTunes Store content, including movies, TV shows, and apps, but no longer music. Permits multiple devices to share the same content, so long as they are all registered to the same iTunes Store account.



FireWire Charging: The original charging technology found in all iPods before Apple migrated partially (2003) and then almost entirely (2008) to the more common USB standard for charging. Most iPods since 2003 and the original iPhone supported both FireWire and USB charging, but in 2008 the iPhone 3G, iPod nano, and iPod touch dropped support for FireWire charging. Accessories such as speakers previously, without notifying consumers, used either FireWire or USB standards to charge iPods; any accessory that used FireWire can no longer charge newer iPods and iPhones.



Flash: Shorthand for Adobe Flash Player, a web browser plug-in for PCs and Macs that enables the display of animated graphics and video. Support for Adobe Flash was left out of all iOS devices due to stability, memory, and battery issues; HTML5 is offered alternatively.

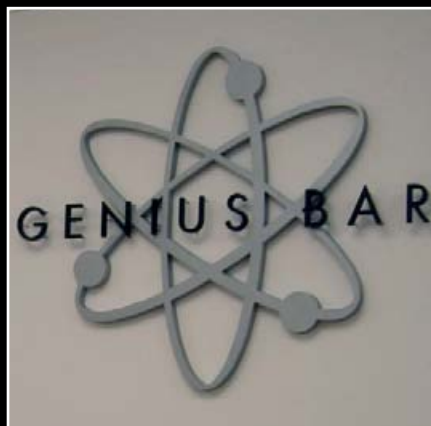
Flash Drive/Flash Memory: A chip-based replacement for a hard disk, requiring less power and physical space, thus enabling the creation of the iPod nano, shuffle, and touch.

Frames Per Second (FPS): Like a flipbook turning pages in rapid succession, refers to the number of still pictures that can be displayed on a screen in one second to create a smooth video image. Human beings can barely perceive more than 30 FPS, but gamers will notice a difference between 30 and 60 FPS. Movies are typically shown at 24 FPS, a rate below which video appears to be choppy.

Generation: As in, "second-generation iPod nano." A term used first by iLounge and later by Apple to distinguish

between successive versions of iPod and iPhone products, given that Apple continued to use the same product names year after year for different models. Often abbreviated "G," such as "iPod 5G" or "iPod nano 3G," though the abbreviation invites confusion with the iPhone 3G - actually the second iPhone model - and with "GB," or Gigabytes, below.

Gigabyte (GB): The unit of measurement for every iPod's, iPad's, and iPhone's storage capacity. Apple estimates that 125-250 songs or 1 hour of video can fit in each Gigabyte of a device's storage capacity, though the actual numbers will vary based on how the audio and video is encoded, as well as other factors. As distinguished from Generation/G above and 3G below, capacity is listed to show "an iPod 5G with 30GB capacity" or "an iPhone 3G with 32GB capacity."



Genius: Refers variously to the key technical support personnel in Apple Stores, and a feature of iTunes that uses information about your current song library to predict additional songs that you might like.

Genius Mix: An extension of the iTunes Genius feature that uses information about your current song library to create playlists of songs that are similar to one another.

Geocoding: Added to iOS 5, a feature that allows street addresses to be converted directly to geographic coordinates, and vice-versa.

Geofence: Introduced with iOS 5 and currently unique to the iPhone 4/4S, this GPS-related software technology creates a virtual "fence" around a certain geographic location, enabling the iOS device to remind you of something when you walk in or out of the area.

Geotagging: The ability of iPhones and other devices with GPS or Location Services to mark photos, videos, and audio recordings with the map coordinates at which they were recorded.

GLONASS: A Russian-built alternative to GPS satellite navigation, supported by the iPhone 4S.

GPS: Outside the Apple world, refers to mapping devices with satellite antenna-assisted ability to know their locations, and offer turn-by-turn guidance from one street address to another. In Apple's world, refers solely to the presence of a small GPS antenna and chip combination that can roughly estimate location on a map, aiding in geotagging, but

lacking turn-by-turn direction software. AGPS is "Assisted GPS," or a GPS chip with help from cellular tower triangulation.

GSM: Global Standard for Mobile (communications), the cellular telephone standard used by 80% of the world's phones, including the iPhone, iPhone 3G, iPhone 3GS, iPhone 4, and iPhone 4S. Enables all iPhones to be used - with roaming charges, or unlocked with different SIM cards - almost anywhere in the world.

Gyroscope: Added to the iPhone 4, iPhone 4S, iPad 2, and iPod touch 4G, this positional sensor enables devices to more accurately know their orientation and track user movements, for both gaming and augmented reality applications.

H.264: Apple's preferred video compression format is a sequel to MPEG-4 technology, resulting in high-quality, comparatively small video files. A challenge for even recent computers to create files in, but no problem for computers, iPods, iPads, iPhones, or Apple TVs to play. One of two key video formats supported by Apple for iPods, iPhones, iPads, iTunes, and Apple TVs; MPEG-4 is the other, less efficient format.

HDCP: An industry-developed copy protection technology for high-definition content, implemented both within televisions and devices that connect to them. Required by the second-generation Apple TV, the iPads, iPhone 4/4S, and

iPod touch 4G in order to play back iTunes Store-sold HD video output at 720p resolutions.



HDMI: A cable standard designed to handle high-definition video and multi-channel audio, plus data transmissions, in a single thick digital connector.

HDR (Photography): High Dynamic Range, referring to the ability of a camera to capture more detail in dark and light areas of an image by taking several quick photos at different exposure levels, comparing the differences, and merging them together into one enhanced "HDR" photo. The iPhone 4 and iPhone 4S include HDR support.

Headphone Jack/Port: The primary way to hear audio from an iPod or iPhone, this 3.5-millimeter-wide hole makes low-power electrical connections with headphone plugs and 3.5mm audio cables, splitting outgoing sounds into left- and right-channel stereo. Current iPad, iPod and iPhone

headphone ports are also used for one- or three-button remote controls and monaural microphone input, as well.



Home Screen: Known to developers as Springboard, the "Home Screen" of the iPad, iPhone, and iPod touch is where the icons for individual applications reside, and accessible at any time by pressing the circular Home Button on the front of these Apple touchscreen devices.

Hotspot: A public access point for wireless Internet access. Also known as a Wi-Fi Hotspot. Through partnerships with businesses such as Starbucks and Barnes & Noble, AT&T offers free Wi-Fi Hotspot access to iPhone users in the United States. Hotspot Internet access is always provided using Wi-Fi.

HSDPA: One of several 3G (or third-generation) cellular standards, "High-Speed Downlink Packet Access." Offers up to 14Mbps download speeds under ideal conditions; supported by iPhone 3GS/4/4S.

HSPA+: Short for Evolved High-Speed Packet Access, this stepping stone to true 4G (or fourth-generation) cellular performance typically offers up to 21Mbps or 42Mbps download speeds - 3 or 6 times faster than the 7.2Mbps HSDPA found in the iPhone 3GS and 4, or 1.5 times above iPhone 4S.

HSUPA: One of several 3G cellular standards, "High-Speed Uplink Packet Access," added to the iPhone 4, iPhone 4S, and iPad 2, increasing cellular upload speeds from 0.4Mbps to up to 5.76Mbps, depending on carrier support and antenna obstructions.

HTML5: An open standard for next-generation web site development, championed by Apple as an alternative to Adobe's Flash for animated graphics and video playback. Increasingly supported by web sites that want their pages to work fully on both iOS devices and modern computers.



iAd: Apple's premium advertising service, introduced in iOS 4, enabling companies to advertise using banners and

full app-sized "rich advertising content" nestled within free or inexpensive apps. iAds leverage newer iOS devices' multitasking to quickly flip back and forth between the ad and the original app, so users aren't discouraged from viewing compelling ads.

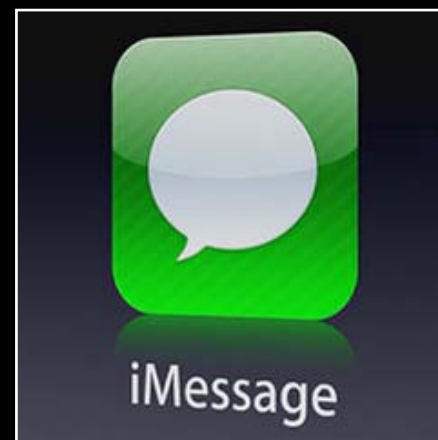


iBooks + iBookstore: Once the name of Apple's low-end laptops, iBooks has become the name for a book- and PDF-reading application for the iPad, iPhone, and iPod touch; iBookstore is the built-in store that sells digital books.



iCloud: Unveiled in mid-2011, this replacement for Apple's MobileMe service is free for all iOS 5 (or newer) device users, storing music, photos, apps, calendars, documents, and settings on Apple's Internet-accessible servers (see Cloud), then automatically

synchronizing them to all of your devices. Also includes a free @me.com e-mail account, and can be upgraded with additional music storage capacity for an annual fee.



iMessage: Apple's upgraded Messages app for iPhones, iPod touches, and iPads, enabling any iOS 5 or newer device to send and receive SMS-/MMS-style messages without relying upon cellular networks or paying per-message fees.

In-App Purchasing: Also known as IAP, this allows developers to sell additional content - game levels, additional characters, or application features - from within an already-downloaded game or app. For a minimum of 99 cents, a purchase can either download new content and expand the original size of the app, or unlock existing content that was hidden inside the app.

Infrared: Refers to the wireless technology used by most remote controls, using red light that's invisible to the human eye to broadcast flashing signals. Infrared remotes generally work only from 30- or fewer-foot distances, and must generally be pointed in a direct line of sight towards the receiving device. Superior remote controls use radio frequency (RF), which is not as limited in feet or direction.

Internet Radio: An alternative to AM, FM, and HD Radio that depends solely upon the Internet rather than broadcasting towers in order to transmit music and talk programming to users, generally in a "streaming" form that is passively heard by the listener rather than controlled. Thousands of stations around the world now offer Internet Radio; traditional AM and FM stations now offer their content in this format as well. iTunes, Apple TVs, and third-party iPhone/iPod touch/iPad apps can stream Internet Radio.

iOS: The most recent (and likely final) name of what was previously called iPhone OS and OS X iPhone, referring to the operating system that powers all iPhones, iPod touches, iPads, and the second-gen Apple TV.



iPad With Wi-Fi: The original base model of Apple's tablet computer, using a 9.7" touchscreen and an 802.11n wireless chip to offer Internet access at homes, offices, and Wi-Fi hotspots, plus most of the media and app features of iPhones.

iPad With Wi-Fi + 3G: The high-end original iPad, adding a 3G cellular data chip to offer Internet access on the road, typically without the need for a multi-month service contract.

iPad 2: Apple's second-generation tablet computer, built thinner and lighter than the original while containing much faster processors and twin cameras for FaceTime. Comes in Wi-Fi-only or Wi-Fi + 3G versions, as well as white- or black-bezeled versions, each with silver backs.

iPhone: The family name for Apple's line of cellular phones with integrated iPod media capabilities and Internet functionality built in. Also refers to the original 2007 product of the same name, which was discontinued in mid-2008.

iPhone 3G: The 2008 replacement for the original iPhone, named specifically to reference its 3G cellular compatibility, which offered GPS, superior speeds, and better network compatibility than the first model. Discontinued in 2010 after two years of sales.

iPhone 3GS: The 2009 sequel to the iPhone 3G, with an added "S" to indicate superior speeds achieved through faster chips, more RAM, and better cellular capabilities relative to the iPhone 3G, plus a compass and video camera. Now sold only in an 8GB capacity.



iPhone 4: The fourth member of the iPhone family, featuring a "Retina Display" screen, "FaceTime" video calling, and a rear 5-Megapixel camera amongst other improvements. Originally sold in 16GB and 32GB capacities, it's now offered in 8GB capacity, as well as black or white versions.

iPhone 4S: The fifth-generation iPhone, preserving all of the features of the iPhone 4 while adding an 8-Megapixel rear camera, faster chips, and the Siri intelligent assistant. The first iPhone to come in a 64GB capacity.

iPhone OS: The former name of iOS, changed in 2010 with iOS 4.



iPod Click Wheel Games: Refers to a library of roughly 50 pieces of software developed from 2006 through 2009 to be played on the iPod 5G, classic, and nano 3G, 4G, and 5G models. These games sold for \$5 each with the exception of a few \$1 titles, and are incompatible with the iPhone, iPod touch, Apple TV, and other Apple products. Quietly discontinued in 2011.

iPod: The family name for Apple's line of digital media players, as well as the iPhone/iPad applications that emulate them. Also refers to the original 2001 product of the same name, renamed in 2006 to "iPod classic." Has traditionally referred to a pocket-sized (or smaller) audio player that may or may not have other capabilities. Original iPods exclusively featured white

or black plastic face plates and polished stainless steel rear casings; black and red-faced versions were released from 2004-2006 with the rock band U2.

iPod classic: Apple's sole remaining hard disk-based digital media player, previously known as the iPod. iPod classics have exclusively featured silver or black anodized aluminum face plates and polished stainless steel rear casings. Currently available only in a 160GB capacity.

iPod mini: Released in 2004, Apple's first attempt to shrink the iPod into a physically smaller, less expensive, and less capacious version. Pioneered the use of colored anodized aluminum shells as a resilient, eye-catching, and personalizing alternative to the plastic and stainless steel full-sized iPods; established 4GB of storage capacity, size, and colors as key to appealing to mainstream users. Discontinued in 2005.

iPod nano: Released in late 2005 as a replacement for the iPod mini, Apple's first attempt to repackage a color-screened iPod in an "impossibly thin" shell, using flash memory as a replacement for the hard disk. Replaced annually every year since introduction with a new design, adding video capabilities in 2007, evolving from two plastic and stainless steel body colors to nine by 2008, and adding video camera, speaker, microphone, and FM radio features in 2009. Lost all

video and camera features in 2010 when shrinking to size of iPod shuffle, but gained a touchscreen. Currently available in 8GB and 16GB capacities.

iPod photo: Released in 2004, this thick, expensive iPod was Apple's first with a color screen and photo playback, later to be shrunk, price-chopped, and renamed just "iPod."

iPod shuffle: Released in 2005, this screenless iPod was Apple's first to hit a \$99 price point, and the first to use flash memory instead of a hard disk for storage. Pitched as wearable and designed for users who didn't need the complexity of Click Wheel controls, the shuffle shrunk into a matchbox-sized form in 2007, and then smaller in 2009, losing its integrated buttons in favor of a headphone-mounted remote control. It regained buttons and audio quality in 2010.



iPod touch: Released in 2007 after the original iPhone, this was the first widescreen, Wi-Fi, and Internet-ready iPod and, in essence, an iPhone without the phone, camera, speakers, or microphone. Initially crippled

with a deliberately limited subset of the iPhone's features, iPod touch grew with software updates to be extremely similar to the iPhone in applications, adding a speaker and microphone-friendly headphone port in 2008, plus voice controls in 2009, twin cameras and a Retina Display in 2010. Now pitched as the iPod for gamers, every iPod touch runs virtually all the same apps as the iPhone. Apple sells 8GB, 32GB and 64GB models.

iTunes:

Released in 2001, Apple's digital music management software has evolved to become the Mac and PC hub for managing and selling music, video, and game content to iPad, iPod and iPhone users, wirelessly sending audio, photo, and video content to Apple TV users, backing up devices, and streaming media to AirPlay devices. As of 2011's iOS 5, iTunes use is optional; iCloud can be used instead for device backup and synchronization.



iTunes in the Cloud: Apple's mid-2011 upgrade to allow past iTunes Store music and TV show purchases to be re-downloaded by computers and iOS 4/5 devices at no additional charge.

iTunes Match: A paid \$25/year service by which the majority of your iTunes music library can be made available for nearly instant playback on any iOS 5 device using iCloud. iTunes Match scans your entire music library, gives

you quick access to any track it can find in the iTunes Store, and lets you transfer any unlocated tracks to your iCloud account for future streaming.

iTunes Plus: Refers to 256Kbps music sold through the iTunes Store without DRM, and at twice the bitrate/Kbps of prior 128Kbps music sold there.

iTunes Store: The section of iTunes devoted to marketing and selling music, audiobooks, and videos, as well as distributing free and paid podcasts, educational content, applications, and games.

iTunes Tagging: A feature of certain accessories and iPods, enabling the iPods to store "tags" with artist, album, and song data for currently playing radio songs, then synchronize it back to iTunes for location in the iTunes Store.

iTunes U: A section of the iTunes Store devoted to educational content from numerous higher learning institutions, museums, and information providers.



iWork: A collection of three Apple-developed Mac and iOS alternatives to Microsoft Office programs: Pages replaces Word, Numbers replaces Excel, and Keynote replaces PowerPoint.

Documents from iWork programs can be viewed on the iPad, iPod touch and iPhone without the apps.

JPEG/JPG: The primary format for photo storage and display on iPads, iPods, iPhones, and Apple TVs, as synchronized through iTunes or viewed via their Internet connections.

Kbps: Kilobits per second. A measure of the amount of data stored in a given second's worth of audio or video. Higher numbers typically mean higher quality. See Bitrate.

Lithium-Ion/Lithium-Polymer Batteries: Rechargeable battery technology used in iPads, iPods, and iPhones that enables them to operate for around two years before requiring new replacement batteries.

Live Pause: Apple's term for the ability to stop a live radio broadcast, then resume it from the point where you stopped. Found in the 2009-2010 iPod nanos' FM Radio feature.

Location Services: Apple's broad term for GPS and GPS-simulating technologies such as Skyhook, which creates a rough GPS-like approximation of your location by consulting a map of wireless routers. iPad with Wi-Fi + 3G, iPhone 3G, 3GS and 4 models have real GPS, while the iPad with Wi-Fi, iPod touch and original iPhone have no GPS, but can use Location Services.



Lock Screen: Found on the iPad, iPhone, and iPod touch, this screen prevents the device's many apps from being accidentally activated by adding a swipable lock and a photo before you reach the Home Screen of a sleeping iOS unit.

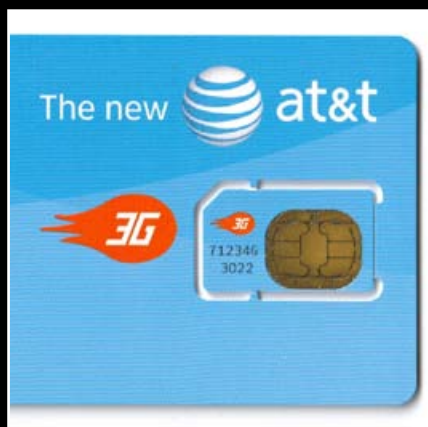
LTE: Also known as 4G LTE, this "Long Term Evolution" standard for fourth-generation cellular wireless transmissions promises peak download speeds of 300Mbps and uploads at up to 75Mbps. Thus far, American LTE networks are still early in development, with speeds in the 5-12Mbps down/2-5Mbps up range. iPhones do not yet support LTE.

Magnetometer: See Digital Compass.

Mbps: Megabits per second. A measure of the amount of data stored in a given second's

worth of video. Higher numbers typically mean higher quality video. See Bitrate.

Megapixel: Each million dots used in a digital photo is referred to as a "Megapixel." The original iPhone and iPhone 3G had 2-Megapixel cameras, while iPhone 3GS has a 3-Megapixel camera, iPhone 4 has a 5-Megapixel camera, and iPhone 4S has an 8-Megapixel camera. iPod touch 4G has a 0.7-Megapixel rear still camera. As a general rule, more Megapixels in the same-sized space (say, 4" x 6") means more detailed photos, though this isn't always 100% accurate.



Micro-SIM: The smaller version of a SIM card (see SIM Card) used by the iPad and iPhone 4/4S.

MiFi: The brand name of a Novatel Wireless portable Wi-Fi hotspot, sold by Verizon, Rogers, and other cellular providers as a way to access their 3G networks on devices with Wi-Fi antennas.

MobileMe: Apple's now-discontinued \$99/year service that stores emails, photos, videos, music, contacts and calendars in a 20GB "cloud"

account, letting you instantly sync email and other info to iPads, iPhones and iPod touches, as well as accessing media and documents stored online. Largely replaced by iCloud.

MP3: Also known as MPEG-3 (more accurately MPEG-2, audio layer 3), the breakthrough audio compression format that eventually led to digital distribution of music, albeit in other, more heavily DRMed audio formats such as protected AAC and Microsoft's WMA.

MPEG-4: Also known as MP4, a video compression format that enabled huge movie and television files to be compressed into sizes that could fit on pocket-sized devices. One of two key video formats supported by Apple for iPads, iPods, iPhones, iTunes, and Apple TV; H.264 is a newer, superior format.

MSRP: Industry abbreviation for Manufacturer's Suggested Retail Price. Virtually every product sold in the U.S. has one; SRP and RRP mean the same thing.

Multitasking: Refers generally to the ability of a computer to do several things at the same time, displaying one or more of them on screen at the same time while others work in the "background," invisible to the user but still occupying the computer's processor and memory. Though all iOS devices multitask, only iOS4/5 devices allow third-party applications to do so.

Multi-Touch: Apple's term for the technologies it uses to enable touchscreens and trackpads to recognize more than one finger's movement at a given time, enabling pinch zooming, two-finger scrolling, and other tricks.



Nike + iPod (Sport Kit): The 2006 fruit of a collaboration between Apple and fitness apparel company Nike, combining an iPod-based receiver with a Nike shoe-based sensor to track the distance walked or run by the user. The iPod then synchronizes the workout data with iTunes and a Nikeplus.com web site, providing ongoing performance metrics. Current iPod touch, iPhone 3GS and iPhone 4/4S models have Nike+ wireless receivers built-in; the accessories are compatible with iPod nanos but not with iPod shuffles, classics, minis, or earlier iPhones. In late 2011, Apple enabled the sixth-generation iPod nano to offer Nike + iPod-like run tracking with its pedometer.

Notifications: Previously displayed in a small blue box in the center of an iOS device's screen, these text and image

boxes can contain messages from other people, reminders, mentions of past phone calls, updates from apps, and more, interrupting whatever else you're doing on your device. As of iOS 5, all notifications are brought together in a Notification Center, and many are displayed on your Home Screen for immediate access.

Office: Refers to Microsoft Office, the dominant productivity suite for word processing (Word), spreadsheet (Excel) and presentation (PowerPoint) creation. iPad, iPhone and iPod touch can display Office documents for reading only.

Oleophobic Coating: A complex way of saying "oil-resistant." Found on the iPad, iPhone 3GS and iPhone 4/4S screens, this coating makes it easier to remove finger and face smudges with a simple wipe of the display.

Optical Audio: Refers to the fiber optic cables used to connect certain AV receivers to components for a digital stereo or multi-channel audio signal. Both Apple TVs, all AirPort Expresses, and most Mac computers are capable of optical audio output.

PDF: Portable Document Format. Created by Adobe, this standardized format enables text, bitmapped graphics, and vector artwork to be assembled into files that look the same from machine to machine, and print in high-resolution on printers. iPads, iPhones and iPod touches

can display PDFs, now within Apple's iBooks application.

Pedometer: A piece of hardware that measures the number of footsteps taken by the user, assisting in calculations of calories burned during a given period of time. Found in the 2009-2010 iPod nanos.

Photo Stream: Added in iOS 5, this iCloud-based feature automatically gathers photographs snapped by all of your iOS 5 devices, placing them in a "last 1,000 images" collection that can be viewed from your computer, Apple TV, or any other iOS 5 device. Also can share photos synced from your digital camera to your computer with iOS devices.



Ping: Added to iTunes 10, this music social network is designed to help iTunes Store shoppers get recommendations from friends, as well as follow the activities of artists selected by Apple to receive special accounts.

Pixels: The colored square dots that create images on computer and portable device screens. If two screens are the same size, and one has more pixels per inch (PPI, aka dots per inch or DPI) than the other, the first screen is capable of displaying pictures with a greater level of detail.

Podcast: Term that describes radio- or TV show-like audio and/or video recordings that are distributed solely over the Internet rather than on radio or TV. Podcasts can be found in the iTunes Store or on individual web sites, and are playable through iTunes, iPads, iPods, iPhones, and Apple TVs.

PowerVR SGX: The graphics processors used in third-, fourth-, and fifth-generation iPhones and iPod touches, as well as in all iPads. Developed by Imagination Technologies as energy-efficient alternatives to the massive, power-hungry graphics chips in Macs and PCs. Original versions had only one processing core; current versions have two, and a four-core chip is now found in PlayStation Vita.

Predictive Text: A software technique to guess what you're trying to type or about to type from what you've already typed, sometimes enabling you to skip finishing words and just accept the software's guess as correct. Used often in searching.

(PRODUCT) RED: The official brand of the Global Fund to Fight AIDS, Tuberculosis and Malaria, licensed to partners who produce red versions of their products to sell with charitable proceeds given to the Fund. Apple partnered with the Global Fund in 2006 and has released five iPod nanos, two iPod shuffles, one iPad Smart Cover, and iTunes Cards with the (PRODUCT) RED logo.

Proximity Sensor: Built in to every iPhone, proximity sensors enable the phones to deactivate and activate their screens when faces are brought close to the controls.

Realtime: Refers to the ability of a user to interact with or edit something as it's happening or with 1-to-1 speed rather than on a delay. Realtime video editing, as one example, means that changes are made without having to wait minutes or hours between edits; "slower than realtime" implies a wait.



Remote and Mic: As used by Apple, a short term to reference the current combination of a microphone with a three-button volume and multifunction track remote control on certain of its iPod, iPhone, and iPad Earphones.

Resolution: The total pixel count of a screen, generally measured horizontally and then vertically. The iPod classic has a resolution of 320x240 pixels, while the old iPod touch and iPhone 3GS have a resolution of 480x320 pixels, and the iPhone 4/4S and iPod touch 4G have resolutions of 960x640 pixels, with iPad and

iPad 2 at 1024x768 pixels. Higher resolutions make images and videos look more detailed, when screen size is held constant.

Retina Display: Apple's name for a screen with resolution so high that the human eye cannot perceive individual pixels. Currently used in the iPhone 4/4S and iPod touch 4G, which feature 326 pixels per inch in their 3.5" displays.

Safari: Apple's web browser, now found on iPads, iPhones, iPods, Macs, and PCs.

Screen Mirroring: The ability of a device to use an external screen (such as an HDTV or computer monitor) to display whatever it's on its own screen. The iPhone 4S and iPad 2 can do this via Apple's Digital AV Adapter, or with AirPlay Mirroring.

Season Pass: The iTunes Store term for a subscription to an entire season of episodes that download one at a time as they're released into the Store.

Shuffle: To randomize the order of audio tracks or videos. The iPod shuffle took its name from this iTunes feature, which Apple started to give greater prominence in earlier iPods in the year leading up to the shuffle's announcement.

SIM Card: A Subscriber Identity Module; a tiny chip-based card that links a cell phone to a specific billing account for access to phone and data services. Every iPhone and the iPad 3G have a SIM card slot.



Siri: An extension of Apple's earlier Voice Control, combining impressive voice recognition, text-to-speech, and artificial intelligence technologies to create an "intelligent assistant" that listens to your voice and responds to questions. Based on a free app released for iPod touches and iPhones by Siri, a company Apple acquired; the app has since been discontinued and the feature radically expanded as a key feature of the iPhone 4S.

Spoken Menus: Apple's accessibility technology for fourth- and fifth-generation iPod nanos, enabling users to hear all of the nano's menu options read through the headphones or integrated speaker. See also VoiceOver.



Spotlight: Apple's name for a system-wide search feature, found first on Macs before

coming to iPod touches, iPhones, and iPads.

Stainless Steel: The metal used for the mirror-polished rear housings of original iPods, then original iPod nanos, iPod classics, and iPod touches. Highly scratchable.

Standby Time: A measurement of the number of hours or days a cell phone's battery can last when the phone is turned on but not doing anything else, such as making or receiving calls, or in the iPhone's case, accessing the web, playing games, or performing audio and video.

Tweet: Shorthand for posting a 140- or fewer-character message on Twitter, the social information service. Support for Twitter and tweeting was added to iOS 5.

UMTS: Universal Mobile Telecommunications System, or the basis of many 3G and upcoming 4G cellular networks. iPhone 3G/3GS/4/4S models support UMTS networks.

USB: Universal Serial Bus, the dominant cable standard for all computers, and the only way to connect iPads, current-model iPhones and most iPods for charging. Uses a rectangular metal box on one end to connect to your computer. Replaced FireWire, the original charging and synchronization technology found in iPods and accessories.

VGA: Short for Video Graphics Array. Refers to 640x480

resolution, which at one point was the maximum resolution for computer screens; VGA-quality resolution is now considered to be lower than what is commonly called high-definition (HD). iPod touch 4G, iPhone 4, iPhone 4S, and iPad 2 each have VGA-quality front video cameras and HD-quality rear ones.

VGA/Dock Connector Adapter: Originally only for the iPad, this cable also lets iPhone 4/4S, iPad 2, and iPod touch 4G output HD-quality video to TVs and monitors with VGA ports.



Voice Control: Apple's iPhone 3GS, iPhone 4, and 2009-2010 iPod touch application, triggered by holding down the Home button, that uses a microphone to listen for the user's voice commands to choose music to play back, or in an iPhone's case, make phone calls. Replaced by Siri in iPhone 4S, but still can be toggled back on.

VoiceOver: On iPod nano and iPod shuffle, the term VoiceOver refers to Apple's text-to-speech technology that tells the user the name of a currently playing song, and on the iPod shuffle, the potential names of selectable playlists. On the iPads, iPhone 3GS, iPhone 4/4S, and the iPod touch 3G + 4G, VoiceOver refers to an accessibility option that lets the user hear text-to-speech for anything on the screen that's touched. See also Spoken Menus.

Wi-Fi: Refers to 802.11a, 802.11b, 802.11g, and 802.11n wireless connectivity standards that enable the iPod touch, all iPhones, and Apple TVs to send data back and forth from computers and the Internet without using cables, or relying on cellular networks. Old iPod touch and iPhone devices support only 802.11b and 802.11g, which are slower and older than 802.11n, a Wi-Fi standard that is supported by all shipping Macs, iPod touches, iPhones, iPads, Apple TVs, and most PCs.

Widescreen: Generally refers to a screen that is capable of displaying movies and in some cases TV shows with a 16:9 aspect ratio - wider than the 4:3 aspect ratios of pre-HDTVs.

Worldphone: A cellular phone that can be used in most parts of the world. The term was once used to refer to GSM phones that worked on different frequencies in different

countries; it now anticipates support for both GSM and CDMA standards, and will likely expand to refer to 4G/LTE standards in the future.



WWDC: Short for Worldwide Developers Conference, Apple's annual June event for Mac OS X and iOS software developers to learn about the company's latest operating systems, software, and generally hardware as well.

YouTube: A Google-owned free hosting service for amateur and professional video content, uploaded by users, and viewable anywhere in the world. iPhone, iPod touch, iPad, and Apple TV have YouTube browsers built in; iPhone 3GS/4 and iPod touch 4G can upload videos directly from their cameras to the service.

3G: Understood in the cell phone context, a broad reference to "third-generation," broadband Internet-approaching cellular data services that are superior to EDGE and earlier analog/digital cellular technologies. The iPhone 3G and 3GS get their names from these networks, as Apple sought to let users know that the new models would support faster Internet connectivity. In the iPod

context, refers to third-generation iPods, iPod nanos, iPod shuffles, and iPod touches, which have sometimes been known as "iPod 3G," "iPod nano 3G," "iPod shuffle 3G," or "iPod touch 3G," or alternately called by new defining features or dates of release.

4G: In the cell phone context, a reference to "fourth-generation" cellular data services, which in some cases will be capable of rivaling wired broadband speeds. LTE is considered a "true 4G" service, while HSPA+ is a stepping stone between 3G and 4G.



30-Pin Connector: See Dock Connector, above.

802.11b/g: The Wi-Fi standards supported by pre-2010 iPhone and iPod touch models for accessing the Internet through a wireless router or hotspot.

802.11n: The faster, longer-distance, and newer Wi-Fi standard supported by 2010 and newer iPhone, iPod touch, and iPad models for accessing the Internet through a wireless router or hotspot; has been supported by Apple TV since the first model and numerous other Apple products for years.



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The iLounge Pavilion.

Occupying over 80,000 square feet in the Las Vegas Convention Center, the iLounge Pavilion is now the largest exhibition area at the world's leading consumer technology trade show, the International Consumer Electronics Show (CES)! From January 10-13, 2012, hundreds of iPad, iPhone, iPod, and Mac developers will show new accessories and apps, more Apple product debuts than any event, anywhere.

iLounge is proud to have created the iLounge Pavilion as a service to the Apple community, and does not in any way profit from or sell space for the area. Exhibitors interested in joining the iLounge Pavilion should contact Tira Gordon at tgordon@ce.org for details. We hope that you'll visit us at booth 4614 in North Hall!



2010: 25,000 ft²



2011: 50,000 ft²



2012: 80,000 ft²

iLounge Pavilion Exhibitors As Of November 2011

How big is the iLounge Pavilion going to be in 2012? Huge. Nearly 300 exhibitors from all over the world will be showing off the latest Apple accessories and apps, up from around 100 in 2010 and 200 in 2011. This special event now occupies half of the Las Vegas Convention Center's North Hall, and grew so much this year that an annex area is opening in South Hall to handle overflow. It's going to be an amazing show.

A-Fone Co., Ltd.	Dongguan LongRich Elec.	iPort	OfferBox	SZ Timear Technology Co.,
AAMP of America	Doria International Inc.	iSkin Inc.	Outrion (Blutron Group)	SZ Top Union Global Tech.
Abel Tech.	Dotz	iStabilizer	Ozaki International	SZ Update Electronics Co.
Acousticom Corp.	Dr. Bott	Itec Electronics	Padholder	SZ WinTop Electronic Tech.
Advance Design Limited	Dream Wireless, Inc.	Ivyskin USA	Padlette	SZ Wisda Electronic Prod.
AE Tech Co., Ltd.	dreamGear LLC	iWave	Pat Says Now	SZ Wisdom Science&Tech.
AiQ Smart Clothing/Texray	Dry Case	iWorld	Perf. Designed Products	SZ WJM Silicone & Plastic
Allen Head Gear, LLC	E-core Audio Limited	J MAS Int'l Production	Photofast Co. Ltd	SZ Yimingda Exactitude
Allsop Inc.	E-Core Technology Co.	Jill-e designs	Pinlo Technology	Skech Marketing Co., Ltd.
Alpheus Digital Co., Ltd	E-Lead Electronic Co. Ltd.	Joby Inc.	PKG	SKM Industries Inc.
Amzer	Etymotic Research Inc.	Just Mobile Ltd.	Portable Sound Labs Inc.	Skunk Juice
Applink Industrial Limited	Evolve Cases	Kanex	Power Mart Industry Co.	Snet International Corp
Aridian Technology Co.	Fanny Wang Headphones	KB Covers	Pro Clip USA, Inc.	Soundmatters International
Armopocket Enterprises	FBL3	Kialink Inc	Pro-Mat Technology LLC	Spider International Inc
Asia To World Group Ltd.	FiberShell	Kopi Incorporation Limited	PT Maestro Community	Standzout
Audéo / Phonak	Forever Young Technology	Krome Technologies LLC	PureGear	Su-Au Onward Co., Ltd.
Ballistic Case Company	Free Free Industrial Corp.	KTTK Company Limited	Quality Camcarrier Corp.	Sunita Telecom Co., Ltd.
Be A Headcase	Free One Hand, LP	Lanchiya Digital Tech.	RadTech, LLC	Sunshine Electronics Tech.
be.ez	Fruitshop International	Lazy-Hands/Kernelope Ents.	Redroks	Switcheasy Ltd.
Beep Industries	GeckoGear Australia	Liberosystem Co., Ltd	Reflying Int'l Electronic	Tablet Bean Bags
Beijing Inforsen Tech.	GelaSkins Inc.	Line 6, Inc	RFA	Tech Launch Pad
Beijing Oriental Guo Tong IT	Geneva Lab	LINGO Limited	Rocstor	Ten One Design LLC
Best Wisdom Ind. Ltd.	Global Cache	LKK Lighting Limited	Rokform	The Joy Factory, Inc.
Beyond Cell	Goodyear Mold Co., Ltd.	Loksak, Inc.	S & R Partners	Thesis
Beyzacases	Gopod Tech Co., Ltd	Luardi	S&D Starking Limited	Three A Technology Co.
Blackhorns Electronic Co.	Gourmandise Inc.	Lucky Goldjyx Co., Ltd.	Sanho Corporation	Toffee International Pty.
Bling My Thing	Greensmart	Luxa2	Scosche Industries Inc.	Totes-Isotoner
Bluelounge	Griffin Technology	Macally/Security Man	Seidio, Inc.	Touchtech Co., Ltd
Bo Jue Tong Technology	Groove Group	Magic Protection Tech.	SZ Akun Electronics Co.	TRL Bot
BodyGuardz	Guangzhou Baiyuan Dist.	Mapi Cases	SZ Anytone Tech. Co. Ltd.	Tune Belt, Inc.
Boom Botix	Guangzhou XinBao Lugg.	Maxell	SZ Aavid Technology Co.	Uniq Creation
Boost Cases	Guangzhou Yicai Craft	MED Computer S.R.L.	SZ Baoming Technology	United Mind Technology
Bracketron	Gumdrop Cases	MEElectronics	SZ BHX Technology Co.	Urban Tool GmbH
Brenthaven	Hard Candy Cases	Melkco Limited	SZ Ctech Sci. & Tech.	USAePay
CableJive	Hearing Comp. / Comply	Meridrew Enterprises	SZ Cyoshin Electronics	Valenta International BV
California Headphone Co.	Helium Digital, Inc.	Microchip Technology Inc.	SZ Dingchengchang	Vantage Point Products
Camalen	Henge Docks	Mighty Dwarf	SZ Divoom Tech. Co.	Vdera Inc.
Can You Imagine	Hex	Mimoco Inc	SZ Dong Xi Industry Co.	VentureCraft, Inc.
Carbon 6 Gear, Inc.	Hipstreet	Mobee Technology	SZ Dynamic8 Technology	ViewerMate.com
Case-Mate	HIVision Co., Ltd.	monCarbone	SZ E-Tek Co., Ltd.	Vogel's Products bv
Castiv Inc	Home Ray Technology	mophie	SZ Elite Electronic Co. Ltd.	Wanxinda Tech. Product
Celluon Inc.	Hyperpower Holding Ltd.	Moshi	SZ First Union Technology	Westone Laboratories, Inc.
Cerwin-Vega Mobile	IBattz Pte Limited	MSW Wireless	SZ Golden Trees Silicone	Win Grand Industries Ltd.
Cham Battery Technology	iCat by EK Ekcessories	MusicSkins	SZ Heui Xint Technology	Winner Wireless
China (Far East) Distribution	iClooly Co., Ltd	Musubo Company Limited	SZ Inasmile Technology	WorldStrong Co. Ltd
Cidi Electronic (HK) Co.,	iConnectivity	Native Union	SZ Jiehua Technology	Worth Ave. Group
Clear Protector	id America	Navjack Co., Ltd.	SZ Kangchengtai Industrial	Wrapsol LLC
Cobra Electronics	IDAPT	Naztech	SZ Kinstone D&T Develop	Xshot LLC
Concord Keystone Trading	iDevices LLC	Nite Ize, Inc.	SZ Limei Plastic Products	Xsilva Systems
Cover Face	iHealth Lab Inc.	Noetic, Inc.	SZ Lisaier Tronics Co., Ltd	XtremeMac/Imation
CPC Co., Ltd.	iHold Technologies	Nucourse Distribution	SZ Membrane Precise Elec.	Yan Touch Corporation
Cygnett	IK Multimedia	NuForce	SZ Paoluy Silicone Tech.	Yunnan Trio Import & Export
DBEST Ltd.	iMate Supply Inc.	Octa	SZ PKCELL Battery Co., Ltd.	Yutron Co. Ltd.
DC Cases	Imego Infinity Limited	Odoyo Ltd.	SZ Quanli Leather Co., Ltd.	Zipbuds
Designer Sleeves	Imex International	OhMiBod	SZ Shike Kam Wah Elec.	1 Idea Italia Spa
Devleta	Incipio	Orbotix	SZ South Fortune Tech.	
Dexim Santom USA, Inc.	Invoxia	Other World Computing	SZ Supertempo Tech.	
Dongguan Jinsheng Plastic	IPG-Invisible Phone Guard		SZ Taiji Opto-elec Co., Ltd.	

What's New in Mac.

We launched iLounge + Mac in 2011 to spotlight the coolest Mac hardware, software, and accessories. Here are some of our best finds.



Apple MacBook Air (2011)

The original 11" MacBook Air was less than a year old when Apple replaced it with an even better model - same body, screen, and \$999 starting price, but with double the speed, a backlit keyboard, and a new Thunderbolt port. Better yet, Apple offered an optional solid state drive with 256GB, twice the capacity of the prior top-of-line model, at a \$300 premium over the mid-range \$1199 Air. Two of our editors quickly sold old Airs for new ones, and we've been mostly thrilled.

There's only one big drawback to the new models, and that's battery life: the 11" Air now comes in 1.6GHz Core i5 or 1.8GHz Core i7 versions, both of which eat power when they're being pushed to transcode videos or play processor-intensive games.

Apple's promised five-hour battery life drops to as little as two hours if you really push the Air, which means that serious users will want to keep their wall power adapters handy. For us, the tradeoff is fair: the 11" Air now rivals a 2010 13" MacBook Pro in performance, yet weighs roughly half as much and occupies far less space. It's a wicked little machine when it's put to proper use - our favorite Mac yet.

iLounge + Mac

Hundreds of new bags, peripherals, apps and games can now be found in our iLounge + Mac gallery at mac.ilounge.com, with ten sorting categories: Macs, Apps, Cases, Speakers, Camera, Furniture, Decor, Mounts, Peripherals, and Extras.

Our editors are extremely picky, focusing solely on really distinctive products that really make sense for Mac users; inside, you'll find the desks and chairs we use in our own offices, as well as the ones found in Apple's design labs, beautiful speakers of all shapes and sizes, and the camera gear we love or lust after. To cater to different budgets, our selections include everything from free apps to hundred-dollar lamps to multi-thousand-dollar furniture - as long as it makes your Mac cooler or better, you'll find it in here.

What's been big in 2011? New Macs and accessories with Apple and Intel's high-speed Thunderbolt connector as a key feature. But there's much more to see inside. Visit us at Mac.iLounge.com.



2012 BUYERS' GUIDE



Just Mobile Drawer

As the name suggests, Drawer (\$110) adds a storage compartment to your iMac, Cinema Display, or Thunderbolt Display, and it's not cheap. But what you get is a silver aluminum shelf with Mac-matching radiuses, a slide-out plastic drawer with cord management, and enough room for lots of desktop clutter.



Canon PowerShot S100

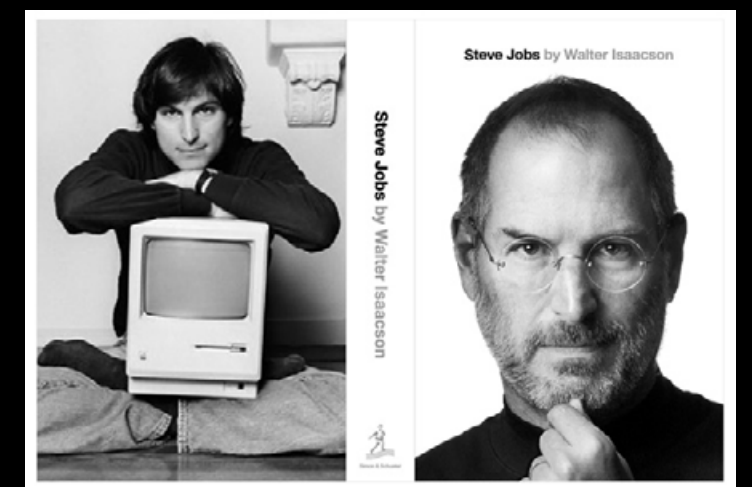
As a sequel of sorts to 2009's S90 and 2010's S95, the new PowerShot S100 (\$430) is Canon's tweener - a pocket camera with an atypically large sensor for low light performance that's closer to a DSLR than the typical point-and-shoot. Armed this time with GPS, a new 5X zoom lens that starts at a wider 24mm, and 1080p video recording features, S100 is a very good pick for users who want to step beyond the solid photo and video performance of the iPhone 4S.

2012 IPODS + IPHONES



DotEmu Irem Arcade Hits

Japanese game developer Irem's Kung Fu, Vigilante, R-Type, and Ninja Spirit were mega hits for Nintendo's classic NES, Sega's Master System, and NEC's TurboGrafx-16. Now DotEmu's Irem Arcade Hits (\$10) lets you play 18 games, including those franchises, great shooters such as In The Hunt, Dragon Breed, and GunForce, and even a few super-obscure releases. It's definitely worth checking out.



Simon & Schuster Steve Jobs

Released shortly after Apple's legendary co-founder/CEO passed away, the official biography of Steve Jobs by Walter Isaacson (\$35) is the first authorized book on a man whose every major move for 30 years was endlessly analyzed. Isaacson's book brings new depth to well-known stories, as well as revelations and personal insights from Jobs, who was interviewed 40 times, alongside numerous friends and rivals.

What's New in iPad.

It's been a great year for the iPad 2, which improved the world-changing first-generation model. Here's what's new since our iPad 2 Buyers' Guide.



Speck CandyShell Wrap

It's the best case for the iPad 2: Speck's CandyShell Wrap (\$55) combines most of the iPad Smart Cover's best features with a brilliantly contoured hard plastic and rubber tablet case. Beyond that case, which is 100% accessory compatible and as protective as anything we've seen, there's a detachable front lid. Cut into three sections that fold into a stand, the lid improves upon the original iPad version, released before the Smart Cover. A streamlined T-shaped bar attaches to the case, and a micro suction strip seals it closed. Only one thing's missing: magnets.



Macally SmartcaseC

If you've already purchased an iPad Smart Cover, you're probably looking for a way to protect the rest of the iPad 2's body; that's where Smartcase C (\$30) comes in. Made from thin, nicely contoured black, white, or clear plastic, it covers almost all of the iPad 2's metal body, and features a lip that wraps around the Smart Cover's spine - an innovation Incipio pioneered with Smart Feather. Macally's shell offers more protection, though, and sells for a slightly lower price; Smart Feather comes a wider array of color choices, including ones that match Apple's.



Check Out Our iPad 2 Buyers' Guide!

Published in June, iLounge's amazing iPad 2 Buyers' Guide includes 146 pages of detailed advice on Apple's tablet computers, accessories, and apps. While the Guide focuses primarily on iPads, a wonderful iDesign section spotlights the industrial and interface designs of leading developers such as iHome, Incipio, Just Mobile, Mobigame, The Omni Group, and Twelve South; it also includes sections on iPhone models that were released after our 2011 iPod/iPhone/iPad Buyers' Guide. As always, it's completely free to download, so grab your copy today!

2012 BUYERS' GUIDE



Belkin Keyboard Folio

After a quiet 2010, Belkin arrived on the iPad scene in 2011 with guns blazing, debuting two of the best accessories yet released for Apple's tablets. If you can live with the slightly unwieldy folio-style case used in Keyboard Folio for iPad 2 (\$100), you'll love the hard plastic keyboard it includes: the keys are amongst the most responsive and well-sized around, ideal for turning iPad 2s into business tools.



Belkin FlipBlade Adjust

Belkin's other major contribution to the iPad scene is FlipBlade Adjust (\$30), the most reasonably priced adjustable portable stand we've tested. Made from aluminum and capable of being tossed into a bag, it uses side-mounted buttons and springs open into video- and typing-friendly positions. Virtually all iPad cases are supported, in either orientation. If you need a stand, it's a great option.

2012 IPODS + IPHONES



PopCap Games Peggle HD

It took too long to arrive for the iPad, but the awesome puzzle game Peggle HD (\$5) is here, complete with Peggle Nights as a \$2 in-app purchase. You still fire balls from the top of the screen into peg mazes, trying to eliminate the orange ones; the iPad version has been remade to fit the 1024x768 display, and plays quite well.



Choiix Wave Stand

Wave Stand (\$40) was designed by Choiix, the style-conscious arm of PC accessory maker Cooler Master. Three curved aluminum legs transform into an adjustable stand, using black rubber feet to protect the iPad or iPad 2 from being scratched. Fully case-compatible, the only knock against Wave is that it costs more than the smaller FlipBlade Adjust without adding any functionality, but if you're looking for a really nice desktop stand, you'll love it.

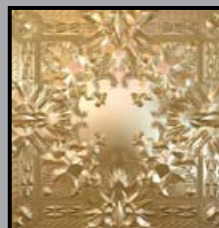
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COLOPHON

The 2012 Buyers' Guide was created using Adobe **InDesign CS5** on twin 11" **MacBook Airs**, a 27" **iMac**, and a **Mac Pro** with a 30" Cinema Display. We had Kanye West and Jay Z's **Watch the Throne** and Girl Talk's **All Day** on replay, as well as Deadmau5's **4x4=12**.



iLounge.com

Since 2001, the world's leading resource for iPod, iPhone & iPad news, reviews, forums, photos, guides, tricks, software, and much more.



Closing the Curtain.

With the iPhone 4S out the door, Apple's engineers are now finalizing the third-generation iPad for 2012. What should we expect from the iPad 3?

A Crazy-Sharp Retina Display

As impossible as it would have been a year ago, Apple has pushed its suppliers to produce high-resolution iPad screens, reportedly with the same size and 4:3 aspect ratio as current iPads, but four times the pixels. At 2048x1536, a 9.7" screen would fall just a little short of the magic 300 pixels per inch "Retina Display" threshold Apple exceeded with the iPhone 4/4S and iPod touch 4G, but would still produce stunning detail indistinguishable from color printed materials.



Improved Camera Performance

The iPad 2's twin cameras aren't great: the front-facing camera has the same 640x480 resolution as an iPod touch or iPhone 4/4S front camera, and the rear camera created dingy-looking 0.7-Megapixel still images. Apple introduced new front-facing 1280x720 FaceTime HD cameras in 2011, but didn't include one in the MacBook Air or iPhone 4S, so it might not wind up in the next iPad, either. We suspect Apple will want to improve at least the rear camera to get closer to the new 2048x1536 screen resolution, which would make a 2- or 3-Megapixel sensor likely.



Next-Generation Chips

Apple's favorite new mobile processors tend to appear first in iPads these days, trickling down to iPhones and iPod touches later on. The quad-core Apple A6 processor is currently in trial production runs, and will likely be based upon the ARM Cortex-A15 or enhanced Cortex-A9 architecture, depending on the new screen's battery and processor speed needs. Bluetooth 4.0 is a lock; expect more RAM and a beefier graphics chip just to keep up with the Retina Display's hunger for smooth pixel transitions.



